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Canada Mortgage
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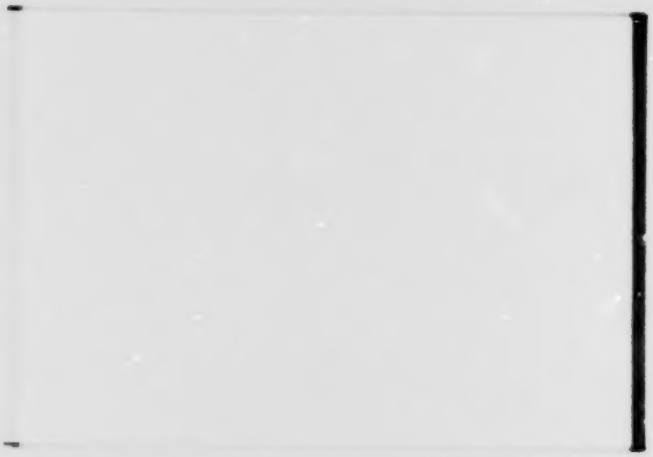

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EVALUATION OF LEBRETON FLATS

BY RESIDENTS

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Prepared for: Canada Mortgage and Housing Corporation

Prepared by: Environics Research Group Limited

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Abstract

In the Summer of 1982, Canada Mortgage and Housing Corporation commissioned an evaluation of the LeBreton Flats Development in Ottawa, Ontario, Canada. This report compiles the data collected from 357 (83%) residents who participated in the project by allowing themselves to be interviewed in their homes.

The study was conducted in the Fall and Winter of 1982-83 by Environics Research Group of Toronto, in association with Joan Harvey & Associates and Klein & Sears.

LeBreton residents were asked numerous of questions regarding neighbourhood, parcel and unit satisfaction, as well as personal data and questions regarding experimental features for noise attenuation, energy conservation and so forth.

The findings show that the measures taken in the LeBreton Development have achieved high levels of user satisfaction and that most, if not all, the demonstration objectives of the developers and the Corporation have been met.

Evaluation of LeBreton Flats by Residents

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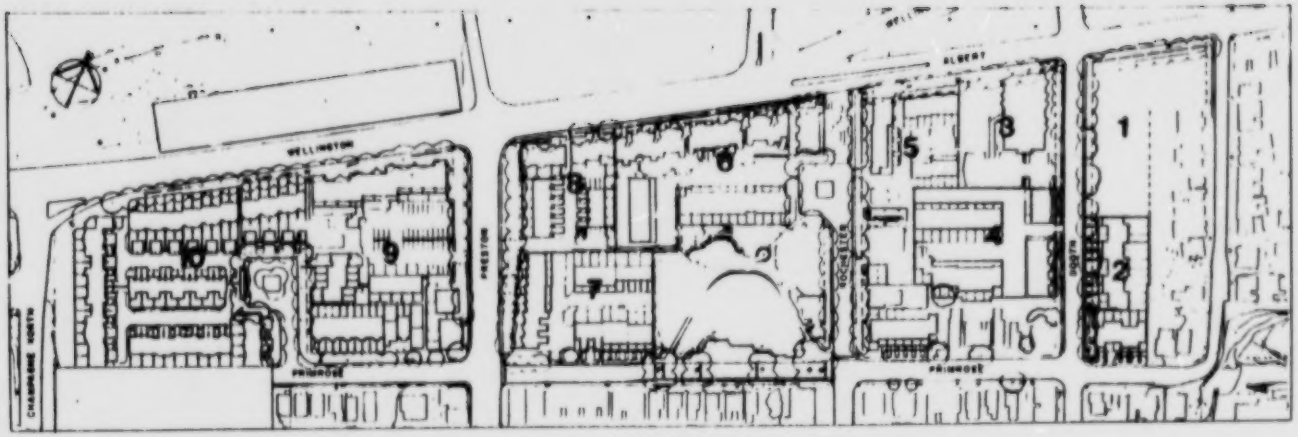
Evaluation of LeBreton Flats by Residents

1.0 INTRODUCTION

In 1972, a Federal policy on the development of the Ottawa core area recommended that the LeBreton Flats be redeveloped as a residential community. Two years later the Federal Cabinet directed the Canada Mortgage and Housing Corporation (CMHC) and the National Capital Commission (NCC) to undertake the planning and development of LeBreton Flats jointly.

Phase I, LeBreton Flats, is located to the west of Parliament Hill, in Ottawa, Canada's national capital. It rests on a six hectare triangular piece of land bordered on the north by the major Wellington-Scott arterial and on the south by Primrose Street. The southern boundary is also adjacent to the existing Dalhousie community. The western and eastern boundaries are Champagne Street and Lorne Street respectively.

The LeBreton Flats Phase I Demonstration Project is comprised of 425 units developed on 10 parcels of land. Seven housing developer groups were involved in the development of Phase I. Seven of the 10 parcels were developed by four Third Sector Housing sponsors and three parcels were developed by Private Sector developers. Table 1 lists the sponsors involved on each parcel developed and provides a description of tenure types, number of units developed, net parcel area and the building forms constructed across the site. The location of each of the 10 parcels on the Phase I site is provided in Map 1.



The Phase 1 site was divided into ten development parcels.

MAP 1

TABLE 1

DESCRIPTION OF HOUSING DEVELOPMENT
ON EACH PARCEL AT LEBRETON FLATS
PHASE I

PARCEL	SPONSOR	SPONSOR TYPE	TENURE	NO. OF UNITS	NET PARCEL AREA (ha)	BUILDING FORM
1	City of Ottawa Non-profit Housing Corporation (City Living)	Municipal Non-profit	Rental	36	0.3393	Townhouses Stacked Units
2	R.J.Nicol Construction	Private Market	Ownership	17	0.3393	Townhouses
3	Centretown Citizens (Ottawa) Corp.	Private Non-Profit	Rental	54	0.3157	5-storey Apartment Building (Double loaded corridor)
4	Alex Laidlaw Housing Co-op Inc.	Co-op	Co-op	36	0.4261	24 Townhouses 12 stacked units
5	Centretown Citizens (Ottawa) Co-op	Private Non-Profit	Rental	39 10 rehabilitated; 29 new	0.4180	29 Townhouses (3.66 m wide) 2 duplex units 8 3-storey walk-up
6	City of Ottawa Non-Profit Housing Corp. (City Living)	Municipal Non-Profit	Rental	54		19 Townhouses 35 stacked units
7	Edmond St. Amour Construction Corp.	Private Market	Ownership	26	0.3721	Townhouses

8	City of Ottawa Non-Profit (City Living)	Municipal Non-Profit	Rental	28	0.3007	10 Townhouses 18 stacked units
9	Tompkins Housing Co-op	Co-op (adults over 50)	Co-op	81	0.7696	5-storey Apartment Building (Single loaded corridor) 25 Townhouses 5 renovated units
10	Perez Corp.	Private Market	Ownership	54	0.9713	Townhouses

The broad goals established to guide the planning of the entire new residential community included the following:

- To offer attractive, durable and affordable housing to a wide range of income groups and household types;
- To fulfill the identified needs and preferences of future inner-city residents with specific reference to those who are inadequately or not presently serviced;
- To provide the highest quality of environment and services, both physical and social, and to ensure integration with the surrounding communities;
- To provide tenure options which allow for community self-management;
- To involve interested citizens, community groups and concerned government agencies in all stages of its planning and development; and,

- To ensure that aspects of the resulting development can be repeated by others on an economically viable basis.

1.1 Demonstration Objectives

Six major demonstration objectives characterized the LeBreton Flats Phase I development community.*

i) To Achieve a Balanced Community

The objective of achieving a community which accommodates and integrates a heterogeneous mix of both homeowners and renters of all income groups and ages was a priority in the development of LeBreton Flats.

ii) To Establish Consistency with Surroundings

The development of Phase I was regarded as an opportunity to extend the adjacent Dalhousie neighbourhood northwards; by establishing consistent surroundings, the necessary physical and social continuity between the two neighbourhoods could be achieved.

iii) To Improve Privacy, Ground Orientation and Resident Identity

During the development of Phase I, emphasis was placed upon maximizing the number of ground-related units on the medium-to-high density site without precluding other priorities such as acoustical and visual privacy, satisfactory parking arrangements, private and functional amenity spaces, child-oriented facilities, and safety and security at both the site and unit

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* See "LeBreton Flats Demonstration Objectives". Ottawa: Canada Mortgage and Housing Corporation, 1983. NHA5612.

levels. Resident identity was to be enhanced by providing a private address even in multiple housing forms.

iv) **To Use Landscaping Effectively**

Landscaping was used at the site to contribute to the visual appeal of such a densely built area while addressing problems typically associated with maintaining cultivated or exotic plant species in a harsh climate. The landscaping objective was also intended to reduce maintenance costs, preserve environmental quality and enhance privacy.

v) **To Conserve Energy**

A major objective of the LeBreton Flats development community was to reduce overall energy consumption below that of a similar community built to the current standards. Energy-saving features had to be both effective and affordable within the fixed capital cost constraints of the developer groups. The strategy employed at LeBreton relied on energy-saving technology, solar gain opportunities, and consumer participation and accountability.

vi) **To Develop a Process Strategy to Implement Demonstration Goals**

Under the leadership of the CMHC, demonstration criteria were formalized through a two-stage build and examine process. The first stage involved the design and construction of eight prototype units to field test

and evaluate the feasibility and acceptability of the demonstration objectives and proposed design responses. The second strategic phase involved the development of 54 housing units on Parcel 6, carried out under a turnkey arrangement with the City of Ottawa. The Parcel 6 development was regarded as an opportunity to produce a large scale model of the demonstration goals.

All housing at LeBreton Flats was designed to meet these objectives, although the means used varied with each parcel. Demonstration objectives were largely met by the overall design and layout of the units. A list of specific demonstration features and their distribution is presented in Table 1A (see following pages).

1.2 Study Objectives

CMHC's Development Evaluation and Advisory Services Division developed an evaluation plan designed to test the technical performance, economic viability and social acceptability of the design approaches demonstrated at LeBreton. The technical performance of features such as the arterial noise attenuation system has been tested* and the acceptability of the demonstration features to the building community involved has been documented.**

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* see "LeBreton Flats Development Evaluation 1: "Sound Barriers for Windows" Ottawa: Canada Mortgage and Housing Corporation, 1981. NHA 5452

** see "LeBreton Flats Development Evaluation", J. Harvey & Associates, Ottawa: Canada Mortgage and Housing Corporation, 1982

TABLE 1A

DISTRIBUTION OF DEMONSTRATION FEATURES AT LEBRETON FLATS

FEATURE	PARCEL															
	1		2	3	4		5		6		7	8		9		10
	Town Houses	Stacked Units	Town Houses	Apart-ments	Town Houses	Stacked Units	Town Houses	Existing Apart-ments	Town Houses	Stacked Units	Town Houses	Town Houses	Stacked Units	Town Houses	Apart-ments	Town Houses
Ground Orientation:																
- at grade entrances	•	•	•		•	•	•		•	•	•	•	•	•		
- at grade private yard	•		•	•	•		•		•		•	•		•	•	•
- narrow front units				2 units			•		2 units						7 units	•
Visual Privacy:																
- enclosed deck	•	•	•	open balcony	•	•	open balcony		•	•	•	•	•	open deck	open balcony	•
Accoustical Privacy:																
Sound barriers between units				steel												
- wood stud party wall				stud	•	•		•	•	•			•			
- concrete block party wall	•	•	composite	•	•	•	•			•	•	•	•	•	•	•
- concrete slab floors		•		•		•				•			•		•	
Traffic noise attenuation																
- traffic noise barriers		•					•			•			•			•
- window box; triple glazing							•			•						
Energy:																
- district heat				•				•		•		•	•	•	•	
- individual meter	•	•	•		•	•	•		•		•					•
- night set-back thermostat					•	•			•	•		•	•			•
- electronic pilot on furnace	•	•	•		•	•	•		•		•					•
- 2 zone air distribution					•				•	•						
- water conserving features	•	•			•	•			•	•		•	•			•

FEATURE	PARCEL															
	1		2	3	4		5		6		7	8		9		10
	Town Houses	Stacked Units	Town Houses	Apart-ments	Town Houses	Stacked Units	Town Houses	Existing Apart-ments	Town Houses	Stacked Units	Town Houses	Town Houses	Stacked Units	Town Houses	Apart-ments	Town Houses
Landscaping & site development:																
Parking																
- at unit	•	•	•		•	•	•		•	•	•	•	•	•		•
- surface				•				•							•	
Open weave/lockstone parking for snow storage							•		•	•	•	•		•	•	•
Design elements:																
- Barrier free units for disabled	(4)			3 units occupied by the disabled				(4)	(4)	(5)				(5)	(24)	
- Skip stop elevators															•	
- Foundation modifications allowing 1.2 m x 2.4 m window in basement												•				•

In commissioning this study, the CMHC wished to address the third component of the evaluation plan: an evaluation by residents designed to determine whether the demonstration objectives and the design solutions implemented to satisfy their needs are satisfactory to LeBreton residents.

Since the demonstration objectives were implemented using a combination of mandatory criteria and guideline recommendations, many of the planning and design decisions were the responsibility of the individual developer groups. Consequently, a wide range of design responses to basic demonstration objectives across the Phase I parcels was expected.

Not all responses could be studied within the scope set for this evaluation. CMHC identified six study objectives which had been developed to satisfy its priorities and information needs. These were:

- To identify the user response to the intent of the demonstration objectives as expressed in the design of the housing and community of LeBreton.

- To identify the residents' reasons for moving to, and living in, LeBreton Flats.

- To determine the level of satisfaction and disappointment experienced by the residents due to the design of the dwelling, parcel and community.

- To establish whether the residents felt a useful involvement in the planning and management process, where there was citizen participation.*

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* See also "Public participant program - some perspectives, LeBreton Flats Demonstration Community". Ottawa: Canada Mortgage and Housing Corporation, 1979. NHA 5235

- To determine how residents responded to the technological solutions selected to deal with the problems posed by the inner-city location.

- To determine residents' responses to the design features included to reduce energy conservation.

2.0 METHODOLOGY

2.1 Questionnaire Design

The questionnaire for the study was designed by the staffs of Environics Research Group, Joan Harvey and Associates, and Klein and Sears, in consultation with Canada Mortgage and Housing Corporation.

Generally, the questionnaire consisted of a number of closed and open-ended questions dealing with resident rating of the importance of and their satisfaction with various aspects of the LeBreton environment. Response categories for importance and satisfaction ratings were scaled using both ordinal and continuous measures. It was hoped that the variety of response types would allow for response verification and for more complex forms of analysis (such as factor analysis).

The questionnaire was designed to query respondents in 3 major areas: regarding their neighbourhood, their parcel and their unit.

Additional questions on energy conservation, parking, children's play and others (see the appended instrument) were designed and included. As well, a battery of demographic questions regarding respondent households were asked. It was arranged to pre-test the questionnaire (see 2.2) in the St. Lawrence development in Toronto.

2.2 Pre-Test

Since many of the questions developed for the study were designed to measure the experience of living in a community developed to meet specific objectives, it was felt that the instrument would be best pre-tested with respondents in a comparable community. The St. Lawrence Housing Community in Toronto was selected as a pre-test site since it was similar to LeBreton Flats in terms of density, urban location, mixture of building forms, and the range of household compositions, income groups and tenure types.

The St. Lawrence Neighbourhood Association agreed to help recruit respondents and during September 1982, 25 St. Lawrence residents volunteered to participate in the pre-test. The questionnaire was tested for length, relevance, ambiguity and consistency.

The results of the pilot confirmed that both the open-ended and closed questions were easy to administer, clearly understandable and provided the desired information. However, the variance in the open-ended responses was extensive and expected to be equally extensive for the LeBreton Flats respondents. The major problem with the questionnaire was the length of time required to administer it. A more succinct instrument was developed in close consultation with the CMHC which took, on average, one hour to administer. Approval of the finalized questionnaire was given by both CMHC and Statistics Canada.

2.3 Sample Design & Questionnaire Administration

The emphasis on social and design heterogeneity at LeBreton resulted in a diverse mix of tenure types, building forms, design solutions and household and income groups being accommodated. A wide sample of LeBreton residents was therefore required to generate a sufficient data base for meaningful and reliable analysis and segmentation of the residents' responses across social and design variables. Random and stratified sampling procedures were ruled inappropriate for the LeBreton Study; the wide range of design and social factors of interest made the sampling option at best arbitrary and, at worst, unreliable.

All 432 LeBreton households were approached for an interview. Letters from CMHC requesting participation were hand-delivered to all LeBreton residents less than one week before the interviewer arrived at their door. Interviews were conducted between October 30, 1982 and November 13, 1982. Residents were provided the option of conducting the interview in either official language. Interviewers were instructed to make repeated efforts to contact all 432 households, and up to 10 attempts were made to contact households that were unavailable previously. Interviewers were also instructed to aim for an equal distribution of male and female adult respondents.

2.4 Response Rates

Three unoccupied units decreased the actual universe of respondents to 429. There were 23 refusals (5%), one case where

a language barrier (other than French or English) prohibited an interview and 48 unavailable households (11%) for a total of 72 (17%) failed contacts. A total of 357 one-hour interviews were completed, representing an effective response rate of 83%. Sixty percent of respondents were female; 40% were male.

2.5 Analysis Plan

Analysis of results was undertaken at a number of levels. In the first case, univariate descriptive analysis was undertaken for each variable. Secondly, crosstabulation on each variable by parcel and tenure type was also undertaken. Beyond this, factor analysis was planned to determine which groups of variables were most relevant in determining resident satisfaction with various neighbourhood, parcel, unit and other features.

It was intended that satisfaction with various elements at LeBreton would be compared with residents' ratings of the importance of these same elements, seeking to determine whether there was a significant degree of correlation between satisfaction and importance. Furthermore, the factor analysis would provide a profile of residents' satisfaction which could then be compared with demographic and other measures.

2.6 Report

This report is a result of the aforementioned analysis plan, with one notable exception. In our attempt to perform factor and other multivariate analyses, we were unable to successfully

develop the profiles we had intended. The reason for this was that satisfaction was so high amongst residents that the analysis would produce no more than one meaningful factor in any of the three dimensions (neighbourhood, parcel and unit).

It was our intention to report on the significant factors contributing to resident dissatisfaction. However, it was our finding that insufficient numbers of residents were consistently dissatisfied to make this analysis possible.

3.0 RESULTS/DISCUSSION OF FINDINGS

3.1 Level of Satisfaction

Prior to any detailed probing about specific aspects of their neighbourhood or unit, respondents were asked: "Generally speaking, how satisfied would you say you are with living at LeBreton Flats?" (Question 1(a)).

This measure of satisfaction was interpreted as an indicator of overall resident satisfaction which would later be qualified or accounted for by the results of the detailed questioning.

The majority of respondents (89.5%) expressed satisfaction with living at LeBreton. There were some discernable differences between parcel respondents in the strength of expressed satisfaction. While the majority of respondents from all parcels expressed satisfaction, owners (parcels 2 and 7) tended to be the most satisfied group at LeBreton. A breakdown of satisfaction by parcel is included in Table 2.

TABLE 2

GENERAL SATISFACTION BY PARCEL
Parcel Number (N)

Parcel No. (N)	1 (34)	2 (14)	3 (38)	4 (27)	5 (33)	6 (46)	7 (23)	8 (24)	9 (64)	10 (49)
Satisfied	88%	100%	92%	100%	94%	91%	100%	75%	83%	86%
Neutral	3	-	-	-	6	2	-	17	11	8
Not Satisfied	9	-	8	-	-	7	-	8	6	6

(5 missing)

There was some concern that dissatisfaction might be severe enough to force people to leave LeBreton. The survey found that only 12 of the 37 people who were either neutral or dissatisfied planned to leave LeBreton and one-half of these people were lower income private non-profit renters. These preliminary indicators would suggest that attracting and retaining the lower income rental groups would be the most persistent problem.

3.2 Awareness of Physical Features

Respondents were asked: "Are you aware of any physical features included at LeBreton which were intended to make living there more agreeable or easier, or more satisfactory?" (Question 2(a)).

The survey found that 54.2% of respondents were unaware of any such features and that 45.8% of respondents were aware of physical features intended to make living there more agreeable.

The respondents who were aware of physical features intended to enhance the quality of life at LeBreton mentioned the following features: Design Effort - 60%; Recreation Facilities - 47%; and Facilities to Accommodate the Handicapped - 21%.

3.3 Motivation for Moving to LeBreton/Reasons for Leaving Last Address

The survey asked "Why did you leave your last address?" (Question 4) and "Why did you choose LeBreton Flats rather than other places you looked at?" (Question 3). Respondents' reasons for choosing LeBreton reflected their expectations of living there.

These findings were further analysed in terms of their level of satisfaction arising from improvement over their previous accommodation.

Respondents' primary reasons for choosing to live at LeBreton mirrored their major reasons for leaving their last address (see Table 3).

TABLE 3

REASONS FOR CHOOSING LEBRETON/LEAVING LAST ADDRESS

Reasons for Choosing LeBreton			Reasons for Leaving Last Address		
	%	N		%	N
Location	61	216	Wanted different location	32	114
Costs affordable	37	131	Costs too high	22	78
Design and appearance	33	117	Wanted more space	21	75

Co-op residents most frequently cited high costs as their reason for moving. Municipal non-profit renters cited the need for more space as their main reason for leaving their previous homes. Both co-op residents and municipal non-profit residents cited a desire for a different location as their second reason for moving. Owners and private non-profit renters most frequently cited a desire for a different location as their principal motivation for leaving their previous home. The second major reason for moving, in the case of private, non-profit renters, was a need for more space, and owners cited miscellaneous "other" items.

Moving to LeBreton has meant a change in tenure and unit for a significant number of respondents. Tables 4 and 5 present the changes in tenure and unit report by residents surveyed.

TABLE 4

CHANGE IN TENURE

Previous residence (%)		At LeBreton (%)		Change (%)
Rent - Public market	10	Non-profit		
Private market	68	development	53	-15
Total	78		53	-25
Own	13	Own	20	+ 7
Co-operative	2	Co-operative	25	+23

TABLE 5

CHANGE IN UNIT

	Previous Accommodation	At LeBreton
Apartment (over 4 storeys)	35.0%	22.0%
Single Family	17.4	-
Low Rise Apartment	15.1	-
Townhouses	14.3	55.7
Triplex/Duplex	8.4	-
Stacked Townhouse	1.1	17.0
Semi-Detached	5.3	-
Flat	3.4	-

It must be noted that since certain of these building forms are not represented at LeBreton, the data show a decline in the number of people living in single family, semi-detached houses and flats.

3.3.1 Location Before Moving to LeBreton

Respondents were asked to report where they lived before moving to LeBreton: (a) downtown; (b) elsewhere in the City of Ottawa; (c) in the suburbs; (d) outside Ottawa (Question 36). Table 6 presents the findings from this question.

TABLE 6

PRIOR LOCATION OF RESPONDENTS BEFORE MOVING TO LEBRETON

	%
Downtown	37.8
Elsewhere in the City of Ottawa	30.5
In the suburbs	17.0
Outside Ottawa	14.0

Since a large proportion of LeBreton residents surveyed have had some experience living in the inner city, it was expected that they would be familiar with and accustomed to the advantages and disadvantages of inner-city living.

3.3.2 When Respondents Moved to LeBreton

Generally speaking, it is recommended that residents have at least six months and ideally one year of experience living in their new housing before post-occupancy evaluations are carried out. The fact that the parcels at LeBreton Flats were developed in phases over a three-year period signalled that some residents would most likely have been in their units for less than the ideal period of time.

Fifty-eight (16%) respondents had been living in their units less than six months. The most recent residents were more prevalent among respondents living in both the Tompkins Co-op (parcel 9-23 respondents) and in the ownership units in parcel 10 (16-respondents).

Twenty-three percent of respondents (84) had been residents of LeBreton for six months to one year. These respondents were most frequently residents of parcel 1 (33) and parcel 9 (23).

Thirty-five percent of respondents had been LeBreton residents for one to two years. In fact, the majority of respondents in all parcels except parcels 1 and 10 had done so.

4.0 RESPONSE TO DEMONSTRATION OBJECTIVE OF BALANCED COMMUNITY

4.1 Introduction

In order to meet the demonstration objective of achieving a community that houses a wide socio-economic mix of residents, the following guidelines were observed:

- Phase I was developed with both Social Housing (non-profit) and Private Sector involvement in order to achieve the social, tenure and income mixing objectives.

- The Phase I site was sub-divided and assigned tenure designations prior to development. This was intended to ensure the desired tenure mix.

- Income mix targets were set down prior to development (1977). The final description regarding income mix established that LeBreton Flats, Phase I would be comprised of:

Low Income ($0 - $9,300)	25%
Moderate Income ($9,301 - $18,600)	35%
Middle Income ($18,601 - $26,900)	30%
High Income ($26,901 +)	10%
Total	100%

Unfortunately, federal and provincial housing assistance, which was expected to achieve the mix, was terminated. Instead, at the time of the development of the Phase I site, the socio-economic tenure mix objectives were to be delivered through two mechanisms: the Federal Social Housing Program (Section 56.1 (1) National Housing Act) and private market purchase.

The mandate of the Social Housing Program (also referred to as Third Sector non-profit housing) includes the provision of housing directed towards individuals and families of low and moderate incomes. Program features include a Maximum Unit Price, which is a cost control device to ensure that affordable housing is provided. The funding arrangements set out in the program also stipulate maximum target percentages of rent-geared-to-income households to be accommodated by the Third Sector sponsors. The Maximum Unit Price and target lower income features of the program are seen as the safeguards required to ensure the provision of affordable housing for lower and moderate income communities.

There are two types of Third Sector housing developed: one by non-profit rental sponsors; the other by co-operative sponsors. The two groups differ with respect to the target percentage of the low income households and the type of tenure they offer. Non-profit sponsors have the low income target maximum set at 25% of their units and develop rental accommodation. Co-operative sponsors have the low-income target set at 15% of their units and offer a tenure form which is somewhere between rental and ownership; occupants pay rent but have ownership-like responsibilities and privileges for the management and maintenance of their units and project.

The study objectives regarding social mix were threefold:

- To construct a profile of the demographic mix achieved at LeBreton as compared with the original targets set for the Phase I development;

- To establish whether the LeBreton residents found their housing to be affordable;
- To measure the qualitative impact of the social mixing policy on various aspects of resident satisfaction and behaviour.

4.2 Demographic Profile

The profile of the socio-economic mix achieved at LeBreton Flats is described according to five demographic variables: (1) household type; (2) household size; (3) age; (4) marital status; (5) employment status; (6) income distribution. Table 7 presents the distribution of respondents across all five socio-economic variables.

TABLE 7

LEBRETON RESPONDENT DEMOGRAPHIC PROFILE
(N = 357)

Table 7A
HOUSEHOLD COMPOSITION

	%
With dependent children (family)	37.5
Without dependent children (non-family)	62.5
Total	100.0

Table 7B
HOUSEHOLD SIZE

	%
1 person	23.5
2 people	40.6
3 people	21.3
4 people	11.2
5 people	2.4
Total	100.0

Table 7C
RESPONDENT AGE

	%
18-24	8.2
25-34	44.8
35-44	16.1
45-54	12.7
55 and over	18.4
Total	100.0

Table 7D
RESPONDENT MARITAL STATUS

	%
Single	24.2
Married	48.5
Divorced	19.7
Widowed	6.5
Total	100.0

Table 7E
RESPONDENT EMPLOYMENT PROFILE

	%
Working full-time	67.2
House-spouse	11.8
Retired	5.3
Unemployed	5.3
Working part-time	5.3
Other	5.1
Total	100.0

Table 7F
RESPONDENT HOUSEHOLD INCOME (1981)

	%
$5,000-$9,999	3.3
$10,000-$14,999	8.1
$15,000-$19,999	12.5
$20,000-$24,999	17.9
$25,000-$29,999	11.0
$30,000-$39,999	9.3
$40,000 and over	24.2
Total	100.0

There is a very broad mix of household types, sizes, incomes and ages accommodated across the LeBreton Flats Phase I site. At first glance, it appears that there has been a tendency to attract more of the married, childless households (40.6% of respondents) earning moderate and middle annual incomes. Because the mix included senior citizens living in the Tompkins Co-op, the number of households with children was reduced. When the percentage of family and non-family households are calculated without the senior citizen residents of Tompkins Co-operative, a different profile emerges: 45.8% with children and 54.2% without children have been housed. These LeBreton households tend to be younger (25-34 years of age) and work full-time.

Table 8 presents a breakdown of actual household incomes as compared with the target income mix. Although the general objective of accommodating a wide range of incomes has been achieved at LeBreton, the figures indicate that the actual percentages of low, moderate and middle income households fall short of the original targets while the percentage of high income households exceeds the original target (see Table 8).

TABLE 8
ACTUAL HOUSEHOLD INCOMES VS. PRESCRIBED TARGET MIX
(inflation adjusted, 1981)

Income*	Target (%)	Actual (%)
Low ($0 - $9,999)	25	11.4
Moderate ($10,000 - $19,999)	35	30.4
Middle ($20,000 - $29,999)	30	20.3
High ($30,000 +)	10	38.0
Total	100%	99.9%

* Incomes in brackets refer to questions asked on questionnaire, which were intended to approximate the target income categories.

4.2.1 Socio-economic Mix Across Tenure Types

A closer examination of the socio-economic profile was carried out to determine if the socio-economic mix objectives have been achieved across different tenure types. Because Tompkins Co-operative is for senior citizens, the two co-operative groups were analyzed separately regarding age and family variables.

Table 9 presents the breakdown of household composition across tenure types.

TABLE 9

HOUSEHOLD COMPOSITION ACROSS TENURE TYPES

	Family	4-Person+*	3-Person*	2-Person*	Single
Municipal Non-Profit Renters	44.7%	56.0%	27.6%	25.5%	20.2%
Private Non-Profit Renters	25.8	12.0	26.3	36.6	22.6
Owners	16.7	16.0	25.0	35.2	8.3
Co-operative Residents	12.9	12.0	18.4	20.7	48.8

* Columns add to slightly less than 100% due to missing data.

The evidence of a wide distribution of household incomes at LeBreton generally holds true across the various tenure groups since there are households from each income category living in each of the social housing parcels developed. As expected, the largest proportion of lower and moderate income groups are accommodated in housing sponsored by the non-profit developer groups. The greatest proportion of lower and moderate income

households has been housed in the municipal non-profit parcels. Also, as expected, the largest proportion of high income earners are owners.

An examination of income distribution by tenure shows that there is representation in all income bands in all tenure groups with one predictable exception: owners are not represented in the under $15,000 income categories. Modal incomes for each tenure group are as follows:

Municipal non-profit rental	$15,000 - $19,999
Private non-profit rental	$15,000 - $19,999
Co-op	$10,000 - $14,999
Ownership	$40,000 or more

It is important to point out that although the modal income for the rental and co-operative residents is similar, the distribution of certain income categories across each of the tenure groups is quite different. Table 10 presents a breakdown of the distribution of households within each of the income categories by tenure type.

TABLE 10

TENURE BY TARGET VERSUS ACTUAL HOUSEHOLD INCOME (1981)
T = TARGET A = ACTUAL

Income	Low		Moderate		Middle		High	
	T	A	T	A	T	A	T	A
Municipal Non-Profit Renters	19.5	50.0	42.8	41.2	23.5	33.8	14.3	11.0
Private Non-Profit Renters	11.7	21.1	30.9	20.6	35.3	35.5	22.2	11.8
Co-operative Residents	13.2	28.9	42.1	34.3	19.2	23.5	25.2	16.5
Owners	-	-	3.7	2.9	4.9	5.8	91.3	58.3

There are two possible explanations for the income target shortfalls at LeBreton. First, the housing subsidy programs available were more limited than expected by the time the site was ready for development. As well, the range or reach of the altered Social Housing Program was largely unknown at the time of development and made the achievement of targets difficult.

Second, the means used to achieve the socio-economic mix were not as effective as anticipated, despite a commitment to the goal. The results of a study of the LeBreton Flats Phase I development process* suggest that although the Third Sector sponsor groups were able to meet the rent-geared-to-income funding criteria, the limited amount of subsidy dollars available restricted their ability to reach as many of the moderate income households as they would have liked. In order to manage financially, they felt it necessary to attract a greater proportion of middle and higher income households to offset project costs and simply make their housing development economically feasible.

4.2.2 Summary of Demographic Findings

- 40% of LeBreton households are occupied by two people. Single person households accounted for 24% and households with 3 or more persons constituted 45%.
- Sixty-two percent of respondents are households without children; 38% are family households with children. There were 44 single parent families with children (12%) at LeBreton.
- The bulk of respondents surveyed are under 35 years of age (53.0%). Sixty-seven percent of respondents work full-time.

* See "LeBreton Flats Development Process Evaluation", J. Harvey & Associates. Ottawa: Canada Mortgage and Housing Corporation, 1982.

- Family households tend to be most prevalent in rental housing (70.5% of total), with the greatest representation found in the municipal non-profit housing projects (44.7%). Single-person households are most commonly housed in the Tompkins Housing Co-operative, an adult co-op, (as expected) and in the apartment units provided by Centretown Citizens' (Ottawa) Corporation (as intended).

- Income distribution at LeBreton covers the full range and shows representation in all income bands for all tenure groups with one notable and predictable exception: owners are not represented in the lower income category.

Some noteworthy differences among Social Housing groups are:

- the majority of households earning $10,000 - $15,000 per annum are co-op residents (60%).

- the overall modal income category is $15,000 - $19,999 per annum and the majority are renters in municipal non-profit housing (50%).

- most of the households earning $20,000 - $25,000 are also municipal non-profit renters; private non-profit renters comprise the second largest group within this income band (35.1%).

- the majority of households earning $40,000 or more per annum are LeBreton owners (58.3%).

4.2.3 Respondents' Perceptions of Affordability

Another aspect of the demonstration objective for a socially and economically balanced community was to provide affordable housing in a central location to lower and moderate income groups. Consequently, there was an interest in determining whether LeBreton residents found their housing costs to be within the range that they expected to pay. Respondents were asked, "Is the cost of your LeBreton home...(includes rent, upkeep, operating costs; e.g. utilities, repairs, etc.): (a) a <u>lot</u> less costly than you expected to pay; (b) less costly than you expected to pay; (c) within the range you expected to pay; (d) more costly than

you expected to pay; (e) a lot more costly than you expected to pay, or; (f) you didn't have any expectations or concerns about the cost (Question 5(a)). The respondents' perceptions of housing costs are presented in Table 11.

TABLE 11

RESPONDENTS' PERCEPTIONS OF HOUSING COSTS
(N = 357)

	%
A lot less costly than expected	5.5
Less costly than expected	14.5
Within the range expected	54.6
More costly than expected	18.5
A lot more costly than expected	5.2
Didn't have any expectations or concerns about the cost	1.7
Don't know, no answer	-

Where housing costs were perceived as more costly than expected, residents were asked to explain the cause.

The 23% of respondents who found their housing costs to exceed expectations attributed the additional costs to one of three reasons: rent increases (47.4%); heating costs (27.0%); or expensive rent (25.6%).

Although the majority of respondents (72%) find the cost of their housing within the expected range, further analysis was undertaken to determine whether respondents in particular tenant groups perceived higher than expected housing costs.

TABLE 12

HOUSING COSTS AND TENURE

(N)	MNP (104)	PNP (71)	CO-OP (91)	OWNER (86)
A lot less costly than expected	3.8	4.2	6.6	5.8
Less costly than expected	14.4	18.3	13.2	10.5
Within the range expected	44.2	63.4	53.8	54.7
More costly than expected	26.0	11.3	19.8	11.6
A lot more costly than expected	7.7	2.8	5.5	3.5
Didn't have any expectations or concerns about the cost	2.9	-	-	3.5
Don't know, no answer	1.0	-	1.1	10.5

As far as tenure is concerned, those living in municipal non-profit housing found costs exceeding their expectations as did co-op residents, but in fewer numbers. Private non-profit and owners seem to find housing costs as expected.

4.2.4 Summary

- The expectations of the majority of LeBreton residents regarding housing costs have been met or exceeded: 72% of respondents estimated that their housing costs were within the range, less or a lot less than expected.

- For the remaining 28% of respondents, 82% felt that housing costs were more, or a lot more than expected; 18% did not voice an opinion.

- Respondents attributed housing costs which exceeded their expectations principally to rent increases since moving in (47.4%) and then to heating costs (27.0%) and expensive rents (25.6%).

- Respondents living in municipal non-profit housing and co-ops represent the majority of respondents citing rent increases and heating costs as the problem; co-op residents cite the rent as too expensive more frequently than other tenure groups.

4.3 QUALITATIVE IMPACT OF SOCIAL MIX

Four measures of the qualitative impact of social mix were taken: (1) awareness of mix; (2) satisfaction with mix; (3) perception of neighbourhood; (4) social interaction patterns.

Awareness of mix, satisfaction with mix and perception of neighbourhood were selected to measure respondents' attitudes towards the social and economic mix at LeBreton. Determining the social interaction patterns was intended to provide a behavioural measure of the extent and level of integration within the mixed community.

4.3.1 Awareness of and Satisfaction with Social Mix

Respondents were asked, "Do you agree or disagree that the LeBreton community offers a variety of housing types and living arrangements and has attracted a mixture of persons with different incomes, occupations and lifestyles?" (Question 25(a)). Respondents agreed that LeBreton is a mixed community: 91.3% of

all respondents agreed with the question, 1.4% disagreed and 7.3% stated that they didn't know. When asked, "How satisfied are you with the mixture of people who live in the LeBreton community?" (Question 25(b)), the majority of respondents (79.0% or 267) replied that they were satisfied; 6.2% (21) were not satisfied and 14.8% (50) were neutral.

Not only are the LeBreton residents keenly aware of the "mixed" nature of their community, they also appear very satisfied with this mix. A review of the open-ended responses regarding desired changes at the neighbourhood level, reveals a distinct absence of negative reference to the social mix.

4.3.2 Neighbourhood Boundary - Awareness of and Satisfaction with Group Identity

The following measures were undertaken to achieve homogeneity between LeBreton and the existing Dalhousie neighbourhood:

- The prescribed density of LeBreton, Phase I duplicated the development intensity of the Dalhousie neighbourhood at 76 units to the hectare.

- Building height limits of 10.7 meters within 1.8 meters north of the southern boundary were imposed to facilitate a natural transition between the two areas. Building height limits were also imposed elsewhere on the site (13.7 meters) again to avoid sharp demarcations between the two communities.

- A 0.5 hectare public park was strategically located on the southern boundary of LeBreton Phase I so it could serve both communities simultaneously.

- The use of mature landscaping was encouraged throughout the site to avoid any obvious visual contrast with the landscaping of the older and more established Dalhousie neighbourhood.

- Socio-economic mix targets and the mix of renters and owners at LeBreton were established with consideration for the composition of the existing community.

The notion of community precincts which guided the planning of LeBreton was intended to permit development at a scale which would foster group identity. The physical boundaries separating each community precinct from its neighbour were intentional; the planners felt that the small scale, clearly defined precincts would minimize non-residents intrusions, increase neighbour recognition, enhance the sense of privacy, safety, security and foster group identity and interaction within the parcels.

The question of whether the focus on parcel demarcation had any undesirable effect on neighbourhood perceptions was examined. Residents surveyed were asked, "Would you tell me where you felt your neighbourhood begins and ends?" (Question 26). Table 13 summarizes the findings across the various tenure types at LeBreton.

TABLE 13

PERCEPTION OF NEIGHBOURHOOD BOUNDARY ACROSS TENURE GROUPS

	MNP (103)	PNP (71)	CO-OP (90)	OWNER (86)	TOTAL (350)
	%	%	%	%	%
Parcel only	12.6	23.9	41.1	19.8	24.0
Parcel/one other parcel	12.6	14.1	11.1	14.0	12.9
Larger area/ ward	58.3	60.6	38.9	54.7	52.9
Don't know/ no answer	16.5	1.4	8.9	11.6	10.3

Analysis by tenure groups revealed that the majority of residents in municipal non-profit, ownership and private non-profit tenure categories defined neighbourhood in the larger scale. A closer look at the co-operative respondents tied the "parcel only" responses to a specific group: 30 of the 37 people or 81% who described their neighbourhood by parcel boundary were senior citizen residents of the Tompkins Co-operative. These 30 respondents also comprise the greatest proportion (47.6%) of the Tompkins resident responses given.

4.3.3 Interaction Patterns

Whether this perception of neighbourhood boundary was meaningful as a predictor of interaction patterns was addressed by questions relating to location of friends.

4.3.4 Importance of Socializing

When respondents were asked to indicate the importance of socializing with neighbours, it was rated as moderately important, receiving an average score of 6.3 on a scale of 1-10, with 10 being extremely important. Sixty-two percent were satisfied with their ability to socialize at LeBreton and 30.7% were neutral. Compared to their previous neighbourhood, 43.3% rated the ability to socialize as better and 41.4% rated it as the same. Generally speaking, and in light of the more moderate priority ranking assigned to social interaction, we can conclude that the amount of social interaction at LeBreton is within the expectations and wishes of the residents; that it is satisfactory, and that for 43.3% of respondents it represents an improvement over their previous experiences.

Respondents were asked, "Do you (do your children) have friends: (a) next door; (b) same hallway or floor; (c) upstairs/ downstairs/same row or building; (d) across the courtyard, driveway - same parcel; (e) elsewhere in LeBreton Flats; (f) elsewhere outside of LeBreton Flats (Question 15 (a)(b)). The results are summarized in Table 14.

TABLE 14
LOCATION OF FRIENDS*

	ADULT	CHILD
Next door/same building	42.8%	36.7%
Court/parcel	35.3	43.8
Elsewhere/LeBreton	35.8	46.4
Outside LeBreton	97.8	80.4

* Multiple response: totals for each column may exceed 100%

Table 15 summarizes the location of respondents' friends across tenure types at LeBreton.

TABLE 15

LOCATION OF FRIENDS BY TENURE

(Adult)	MNP	PNP	CO-OP	OWNER	TOTAL
Friends Next Door	35.6%	45.1%	68.1%	39.5%	46.9%
(Children)					
Friends Next Door	39.0	41.2	55.6	4.5	36.1

No tenure difference exists for the most frequent response, friends outside LeBreton, and there are only marginal differences between groups for those identifying friends located elsewhere in the LeBreton community.

The only significant tenure group differences distinguish co-operatives from the remaining groups on one variable: friends next door. While the minority of renters (39%) and owners (40%) indicate they have friends next door or within the parcel, the majority (68%) of co-op residents indicate they do.

Within the LeBreton community, the majority of children have friends either elsewhere in LeBreton or within the parcel, and least often next door or within the building. A breakdown by tenure revealed that owners felt that their children had friends either outside LeBreton or elsewhere across LeBreton and not next door (see Table 15) or within the same parcel; renters and co-op respondents state that their children's friends are located in all four areas.

4.3.5 Impact of Co-operative Membership on Socializing

The findings concerning socialization patterns may be related to the extent residents were involved in the design of units and the extent of their current involvement in decision-making at LeBreton. Respondents were asked, "Were you involved in the design of your unit prior to moving in?" (Question 27(a)). It was found that co-op residents were not only very involved in the design and planning of their units, they are also currently more involved in decision-making at LeBreton.

Although residents of co-operative units do not have explicit ownership of their unit, they do have decision-making opportunities and management responsibilities more akin to those of owners than traditional renters: they participate as a group in the development of their housing and continue to participate in the on-going management of their housing through committees established to handle issues such as maintenance, finances, etc. The fact that LeBreton co-op residents reported having more friends within their parcel than residents from other tenure types may be due to this formalized participation in both the pre- and post-development stages.

Table 16 presents a breakdown across tenure groups of involvement in decisions pertaining to the design and planning of their units.

TABLE 16

INVOLVEMENT IN DECISION MAKING ACROSS TENURE GROUPS

Degree of Involvement	Tenure Group: MNP (103)	PNP (71)	Co-op (90)	Ownership (86)	Total (350)
	%	%	%	%	%
Very involved	6.7	14.1	33.0	8.1	15.3
Somewhat involved	26.0	39.4	47.3	17.4	32.1
Not involved	65.4	45.1	19.8	74.4	51.7
Don't know/no answer	1.9	1.4	-	-	0.9

4.3.6 Summary

- LeBreton residents surveyed are keenly aware of the broad socio-economic mix that has been achieved at LeBreton and the majority of respondents (79.0%) are satisfied with the social mix. Of the remaining minority of respondents, most are neutral concerning the social mix.

- The survey found that although the general objective of accommodating a wide range of incomes was met at LeBreton, the actual percentages of low, moderate and middle income households fall short of the original targets while the percentage of high income households exceeds the original target.

- The finding that 53.5% of the respondents define their neighbourhood in terms of the larger Dalhousie community suggests that the integration of the two neighbourhoods in terms of residents' perceptions has been achieved.

- Although respondents from the Tompkins Co-operative (Parcel 4) deviate from these findings by defining their neighbourhood on the basis of parcel boundaries, this difference in definition of neighbourhood does not translate into a difference in social interaction patterns: both co-operative groups share the same interaction patterns.

- Respondents most often reported making friends with people in units closest to them--an expected and predictable finding given the known relationship between proximity and interaction.

5.0 NEIGHBOURHOOD, PARCEL AND UNIT DESIGN

5.1 Introduction

The following design features were implemented at the parcel and unit level at LeBreton to facilitate privacy, ground orientation and resident identity.

5.1.1 Privacy

The goal was to reduce unwanted intrusion and to offset the impact of high density by providing high levels of acoustical and visual privacy. Details of the design features provided to achieve privacy are provided in Section 5.8 where the findings are reported. In general, features such as mews court planning, traffic noise attenuation measures, high sound insulation between units and enclosed private areas were included in the design of LeBreton Flats.

5.1.2 Ground Orientation

In order to maximize the number of ground-related units within the higher density setting, especially for family households, the following measures were implemented:

- developed 4.27-meter-wide townhouses with direct access to grade
- developed stacked townhouse units with door address at street level
- set-backs determined to permit low-rise, ground-oriented units
- parcel planning and mews court layout selected as most efficient for maximizing the number of ground oriented units at planned density

5.1.3 Resident Identity

LeBreton planners incorporated the following features at the parcel and unit level in order to minimize negative reaction to higher density development through increased resident identity, control and safety:

i) At Parcel Level

- mews court planning to achieve limited non-resident intrusions
- cluster parcel layout to increase opportunities for surveillance and control
- small-scale parcel development to increase group identity and recognition as well as self-management
- small-scale parcel development as a means of ensuring the potential for interaction among residents
- clear parcel demarcations to ensure privacy, foster identity, and a sense of control
- parking provisions at the unit maximized to satisfy convenience and safety and security concerns
- small-scale parcel development also intended to reduce the perception of density

i) At Unit Level

- prohibition of semi-public pathways behind yards
- requirement for private outdoor living area with enclosures
- street address and ground relatedness
- clear demarcation between public/private spaces (limited number of semi-public spaces)

One intent of this study was to determine whether the parcel and unit design solutions proposed to satisfy the demonstration

objectives are acceptable and satisfactory solutions for the users.

5.2 NEIGHBOURHOOD FEATURES

5.2.1 Introduction

A total of 17 neighbourhood attributes were identified for evaluation. These 17 attributes correspond to three aspects of the LeBreton neighbourhood to be examined:

1) locational issues including variables such as proximity to shopping, work, downtown areas, and friends, as well as the appropriateness of the area for raising children;

2) services and amenity issues including variables such as community services, public transit, good schools and the availability of parks or public areas;

3) qualitative issues, including variables such as opportunity to socialize, safety from crime, physical appearance, opportunity to control surroundings, noise, amount of traffic, perception of density or crowdedness, and the preferred balance of children in the area.

5.2.2 Importance of Neighbourhood Features

Respondents were asked to rate 17 attributes according to its importance to them on a scale of 0-10, with 10 regarded as extremely important, when looking for a neighbourhood to live in (Question 7(c)).

Table 17 lists the 17 neighbourhood attributes and respondents' perceptions of their importance in order of average priority across the 10 LeBreton parcels.

TABLE 17

IMPORTANCE OF NEIGHBOURHOOD FEATURES

ACROSS PARCELS

Neighbourhood Attribute	Average Priority	Parcel									
		1	2	3	4	5	6	7	8	9	10	(N)
Safety from Crime	8.0	9.3	8.4	8.3	7.6	8.6	9.5	9.0	9.3	8.8	8.6	353
Not Too Much Noise	8.0	8.2	7.5	7.4	7.8	8.0	8.3	8.0	8.4	8.7	7.4	355
Pleasing Physical Appearance	8.0	8.4	8.0	7.6	7.5	7.4	8.8	8.0	8.2	8.6	7.2	353
Close to Parks	8.0	8.3	8.0	7.8	8.2	8.6	8.4	7.8	9.2	7.0	7.4	354
Not Too Crowded	8.0	8.4	8.1	7.5	7.6	7.7	8.4	7.8	8.3	8.1	7.2	352
Not Too Much Traffic	7.9	8.1	7.9	6.9	7.9	8.0	8.5	7.8	8.8	8.1	7.3	354
Good Public Transportation	7.8	8.1	8.4	7.4	7.8	8.1	8.3	7.7	8.3	8.1	6.9	354
Opportunity to Control Surroundings	7.3	7.7	6.1	6.7	8.8	7.6	6.9	6.7	7.8	7.6	6.8	351
Close to Downtown	7.3	7.4	7.9	7.3	7.6	7.8	6.6	8.3	6.8	7.8	6.9	354
Close to Work	7.1	7.4	6.7	7.6	7.4	7.5	6.5	8.9	7.7	5.3	8.0	345
Close to Shopping	6.8	7.4	6.2	6.2	5.7	7.4	6.9	6.6	7.8	7.6	5.3	354
Opportunity to Socialize	6.2	5.7	4.6	5.9	8.1	7.1	5.7	6.1	6.0	6.8	5.2	353
Good Community Services	6.0	6.9	4.6	5.7	6.6	6.0	7.2	5.7	6.2	6.6	4.3	349
Close to Friends	5.9	5.4	5.2	5.4	5.4	6.4	6.2	7.0	5.6	7.2	4.7	355
Right Number of Children	5.4	6.5	6.0	4.9	6.1	6.7	6.3	4.3	6.7	3.4	5.2	335
Good Place to Raise Children	5.3	6.7	3.3	5.8	7.0	8.6	7.4	4.0	8.7	1.4	3.7	328
Close to Good Schools	4.3	5.4	2.2	4.9	5.2	6.7	6.5	3.0	7.6	1.2	2.1	327

The distribution of importance scores on the 17 neighbourhood attributes across the 10 LeBreton parcels revealed some interesting findings, with certain items being clearly more important to specific groups.

The residents of Tompkins Co-operative, the co-op for adults over 50 years of age, rated five items as significantly more important to them than the average: being close to shopping facilities and friends, not too much noise, not too crowded, and a pleasing appearance. Quite understandably, since a relatively greater proportion of these residents are retired, they also rated being close to work as much less important than the average and being close to schools and the appropriateness of the area for raising children as not important.

Residents of the private non-profit rental parcel 5 rated being close to work, good schools and living in a good place to raise children as more important than the average. Almost half of all households in this parcel have children. Therefore, the data suggest that the higher importance ratings assigned to these child-related items are due to the family household composition.

The third and final notable point is that residents of Laidlaw Co-op regarded the opportunity to socialize and control surroundings and the right balance of children to adults in the community as significantly more important to them than the average.

5.2.3 Satisfaction

Respondents were asked if they were satisfied with the 17 attributes in their LeBreton neighbourhood (see Question 7(a)). Table 18 lists these findings.

TABLE 18

SATISFACTION WITH NEIGHBOURHOOD FEATURES (RANKED)

	% SATISFIED	% DISSATISFIED	% NEUTRAL	AVERAGE IMPORTANCE	(N)
Good public transportation	93.9	2.0	4.1	7.8	(343)
Close to Downtown	93.8	.9	5.3	7.3	(356)
Close to Parks	90.6	3.7	5.7	8.0	(352)
Close to Work	89.9	2.3	7.7	7.3	(298)
Pleasing Appearance	82.3	8.7	9.0	8.1	(355)
Not too Crowded	76.6	13.2	10.1	8.0	(355)
Right Number of Children	71.4	11.7	16.9	5.7	(368)
Opportunity to Control Surroundings	65.1	16.4	18.5	7.4	(335)
Close to Shopping	64.5	19.4	16.1	6.8	(355)
Opportunity to Socialize	62.3	7.0	30.7	6.2	(342)
Good Community Services	62.2	6.0	31.8	6.2	(299)
Close to Friends	59.0	7.4	33.6	5.9	(351)
Safety from Crime	58.0	21.3	20.7	8.8	(338)
Not too Much Noise	57.0	30.3	12.6	8.0	(356)
Not too Much Traffic	49.4	38.2	12.4	7.9	(356)
Good Place to Raise Children	49.4	21.5	29.1	5.8	(247)
Good Schools	36.6	21.1	42.3	4.6	(194)

The majority of residents surveyed were satisfied with 14 of the 17 neighbourhood attributes. The amount of traffic in LeBreton Flats was clearly the greatest source of dissatisfaction across all of the neighbourhood features evaluated; although 49.4% of respondents were satisfied with this attribute, 38.2% were not satisfied and 12.4% were neutral concerning the amount of traffic in the area.

The effect of residents' previous location on satisfaction with neighbourhood features was inconsistent among the respondents, with the following exceptions:

- Respondents from Ottawa were more frequently "less satisfied" (50%) and more "not satisfied" (36%) with the category "not too much noise" than respondents from the downtown core, outside Ottawa and suburban areas, who were all satisfied with this item.
- Although the majority of respondents from all four locations were satisfied with "safety from crime", there was a slight tendency for people from suburban areas and areas outside Ottawa to be less satisfied than people from the inner-city area.
- Although "safety from crime" and "not too much noise" were mentioned as high priorities on the importance scale, they had a lower satisfaction rating, suggesting a possible future problem.

Two other areas were a source of considerable dissatisfaction: good place to raise children and an obvious corollary, availability of good schools. Importantly, the majority of respondents in either case were families with children.

5.2.4 Improvement

The next phase of analysis examined the extent to which respondents felt the 17 neighbourhood attributes provided at

LeBreton represented an improvement (or deterioration) over their previous location (Question 7(b)). Residents' responses to this issue are tabulated in Table 19.

TABLE 19

NEIGHBOURHOOD FEATURES

IMPROVEMENT OVER PREVIOUS LOCATION

	BETTER %	SAME %	WORSE %	TOTAL (N)
Good Public Transportation	58.4	37.5	4.1	339
Close to Downtown	55.4	37.1	7.4	350
Close to Parks/Open Space	51.3	36.7	12.0	349
Close to Work	51.2	41.5	7.4	299
Pleasing Physical Appearance	50.9	30.2	19.0	348
Opportunity to Control Surroundings	47.7	35.0	17.3	329
Opportunity to Socialize	45.3	43.2	11.5	338
Good Place to Raise Children	42.1	28.8	29.2	240
Not Too Crowded	40.7	33.0	26.2	351
Right Number of Children	38.9	41.9	19.3	296
Good Community Services	34.5	55.4	10.1	296
Not Too Much Noise	31.8	28.4	39.8	352
Safety from Crime	27.2	45.9	26.9	338
Close to Shopping	27.0	46.9	26.1	352
Not Too Much Traffic	26.8	27.6	45.6	351
Close to Friends	23.0	64.4	12.5	343
Close to Good Schools	18.9	57.8	23.2	185

5.2.5 Relationship Between Degree of Satisfaction Expressed and Assessment of Improvement

The study found that the items respondents are most satisfied with tend to be those demonstrating the greatest improvement over previous experience. This is particularly true for the availability of good public transportation, proximity to downtown, work and parks, the pleasing physical appearance of LeBreton, a sense of space, not too crowded feeling, and the opportunity to control surroundings.

There was also some improvement noted in the opportunity to socialize and, for those concerned with child-rearing, some improvement in the appropriateness of the area for raising children.

Items which respondents most frequently rate as being unsatisfactory tend to be those rated as worse at LeBreton than they were at their previous location: noise and traffic. Dissatisfaction with both traffic and noise is strongly related to parcel location: the majority of respondents reporting that they were not satisfied live in parcels bordering the Wellington Street arterial (parcels 1,2,3,8,9,). Table 20 compares respondents' satisfaction with noise and traffic noise across the 10 LeBreton parcels.

TABLE 20

SATISFACTION WITH NOISE/TRAFFIC NOISE ACROSS PARCELS
(% SATISFIED)

	PARCEL										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %	Total (N)
Not too much noise/ Satisfied	35.3	42.9	47.4	59.3	66.7	67.4	73.9	50.0	49.2	69.4	199
Not too much traffic noise/ Satisfied	32.4	42.9	31.6	33.3	78.8	65.2	78.3	16.7	34.9	71.4	173
Not too much noise/ Neutral	14.7	14.3	15.8	14.8	15.2	8.7	17.4	20.8	11.1	6.1	45
Not too much traffic noise/ Neutral	11.8	0.0	23.7	22.2	12.1	6.5	4.3	25.0	11.1	8.2	44
Not too much noise/Not satisfied	50.0	42.9	36.8	25.9	18.2	23.9	8.7	29.2	39.7	24.5	107
Not too much traffic noise/Not satisfied	55.9	57.1	44.7	44.4	9.1	28.3	17.4	58.3	54.0	20.4	134

5.2.6 Desired Changes

When asked, "If you could, would you make any changes to any aspect of your unit?" (Question 17(a)), 60% of respondents (214) indicated they would like to make changes. They were then asked, "What would you like to change?" (Question 17(b)). The changes most frequently mentioned are listed below:

1) alteration to the basic design of the unit - 29% (62)

2) reducing amount of traffic in area - 17% (36)

3) more community services - 14% (29)

4) changing type of people - 12% (25)

Forty percent (85) of respondents answered in the other category. The major groups of changes were: fixing up the area (21) and security improvements (12).

5.2.7 Satisfaction with Safety and Security

Since the parcel precinct or mews court design was expected to enhance residents' feelings of safety, security and resident identity by limiting the number of unwanted intrusions and encouraging neighbourhood surveillance, respondents were asked, "Do you feel safe walking in the LeBreton neighbourhood?" (Question 14(a)) and "Do you and your neighbours watch out for strangers in the neighbourhood?" (Question 14(b)).

There was no evidence of personal safety or security concerns during the day at LeBreton since 98.9% (346) of the respondents reported feeling safe. At night, however, 33.7% (116) of the respondents reported feeling unsafe; of these 33.7%, 79% were female. Respondents reported feeling unsafe for three reasons: 1) respondents feel unsafe walking anywhere at night (43%); 2) due to "undesireables" in the area (35%); and 3) due to poor lighting (22%).

The data show that 56% of LeBreton residents surveyed watch for strangers, 37% do not and 7% of respondents did not know. The differences in responses across the various parcels are contained in Table 21.

TABLE 21

SURVEILLANCE OF STRANGERS ACROSS PARCELS
(N)

	PARCEL										
	1 (34) %	2 (14) %	3 (37) %	4 (27) %	5 (33) %	6 (46) %	7 (23) %	8 (24) %	9 (64) %	10 (49) %	Total (351) %
Watch for strangers	47.1	57.1	62.2	100.0	72.7	45.7	60.9	50.0	51.6	38.8	56.1
Did not watch for strangers	38.2	35.7	21.6	-	15.2	45.7	39.1	50.0	43.8	57.1	36.8
Don't know/ no answer	14.7	7.1	16.2	-	12.1	8.7	-	-	4.7	4.1	7.1

5.2.8 **Satisfaction with Public Recreation Space - Parks**

The majority of respondents (90.5%) reported satisfaction with the proximity of parks at LeBreton. When asked, "Do you and your family use the park?" (Question 24(a)), only 52% (186) of respondents reported that they did. An analysis of park use across parcels indicates that park use is related more to location than type of housing since the most frequent and least frequent users (parcels 7 and parcels 2) were from similar housing and tenure groups, i.e. private townhouses.

Respondents who reported park use were then asked: "For what activities do you and your family use the park?" (Question 24(b)). It was found that the park is most frequently used for walks (55%) or children's play (43%).

Of the 132 respondents who reported having dependent children, 61% reported that their children used the park.

5.2.9 Location of Children's Play

Respondents were asked "When your children play outdoors, where do they play? (Question 9(b)). The question sought to determine if children used the mews court for play and whether conflicts with vehicles in the area were apparent. Table 22A summarizes the findings of the question.

TABLE 22A

LOCATION OF CHILDREN'S PLAY

	Often	Sometimes	Never	Total
	%	%	%	N
In Front of Unit	20.0	16.1	61.9	118
In Driveway	20.7	17.2	62.1	116
Visitor Parking Area	3.6	6.3	90.1	111
Street	0.8	6.7	92.5	120

Table 22B indicates the breakdown of play areas by children's age in four categories.

TABLE 22B

PLAY AREAS BY CHILDREN'S AGE
(N)

AGE	0-4 YEARS %			5-10 YEARS %			11-15 YEARS %			16 YEARS+ %		
PLAY AREA	O	S	N	O	S	N	O	S	N	O	S	N
In front of unit	25.4	19.0	55.6	35.4	20.8	43.8	48.1	20.0	29.7	9.7	3.2	87.1
In the driveway	23.8	11.1	65.1	23.4	31.9	44.7	36.8	18.4	23.6	6.9	6.9	86.2
Visitor parking	3.3	8.2	88.5	-	9.5	90.5	11.8	2.9	85.3	3.4	-	96.6

Despite the fact that children play near residences, relatively few respondents (6%) indicated they were bothered a great deal by the sounds of children playing. Children often play in the parking lot or driveway as they grow older. Notably, almost 12% of 11-15 year olds play in the visitor parking area "often".

5.2.10 Summary

- The majority of LeBreton residents surveyed are satisfied with 14 out of 17 neighbourhood features. Items respondents are most satisfied with (i.e., availability of good public transportation, proximity to downtown/work/parks, pleasing physical appearance, and not too crowded) tend to be those demonstrating the greatest improvement over previous experience.

- Conversely, features which respondents most frequently rated as unsatisfactory—amount of noise and amount of traffic—tend to be those rated as worse at LeBreton than they were at the respondents' previous location. In addition, dissatisfaction with traffic and noise is related to parcel location, with the majority of dissatisfied respondents living in parcels bordering the Wellington Street arterial (i.e., 1,2,3,8,9).

- Sixty percent of residents surveyed wished to make changes to the LeBreton neighbourhood, with 29% desiring to make alterations to the basic design of the unit, 17% wishing to reduce the amount of traffic and 14% wanting more community services.

- There is no evidence of personal safety or security concerns during the day among LeBreton residents, with 98.9% of respondents reporting that they felt safe. Of the 33.7% of respondents who felt unsafe at night, 79% were female. Three reasons were cited for lack of security at night: respondents felt unsafe walking anywhere at night (43%), undesirables in the area (35%), and poor lighting (22%).

- Although 90.5% of residents surveyed expressed satisfaction with the proximity of the park, only 52% used the park. Of respondents with dependent children, 61% reported that their children used the park.

- Relatively few respondents (6%) were bothered by children playing near their unit. However, since 12% of 11-15 year olds play in the visitor parking area often, this could be a potential area of concern.

5.3 UNIT FEATURES

5.3.1 Introduction

A list of twenty unit design features relating to two aspects of livability--functionality and quality--was developed. Respondents were asked to rate each item according to its importance when looking for a house or apartment on a scale of 1-10 (Question 16(c)), to indicate how satisfied they were with these features in their LeBreton home (Question 16(a)), and to rate these features as better, the same or worse when compared with their previous home (Question 16(b)).

5.3.2 Importance

The average priority or importance scores were high on all features, ranging from a "low" of 6.7 to a high of 9.1, on a scale of 0-10, where 10 was defined as extremely important. The results are listed below:

TABLE 23A

IMPORTANCE OF UNIT FEATURES
(RANKED)

Functional Design		Quality	
Safety/security	9.1	Sense of privacy	9.0
Desired number of bedrooms	8.5	No adjacent noise	8.8
Suitability for family household needs	8.5	Energy efficiency	8.7
Convenient arrangement of rooms	8.4	Good ventilation	8.6
General storage space	8.1	Daylight in rooms	8.5
Ease of maintenance	8.1	Appearance	8.4
Large rooms	8.0	Feeling of spaciousness	8.4
Parking near unit	7.4	Ability to change units	7.3
Front and back access	7.3	Front door at street level	7.0
Private yard	6.9		
Balcony space	6.7		

5.3.3 **Satisfaction**

Table 23 lists respondents' satisfaction with unit design features at LeBreton.

TABLE 23B
RESIDENT SATISFACTION WITH UNIT DESIGN (RANKED)

	Satisfied %	Neutral %	Dissatisfied %	Total (N)	Level of Importance
Daylight in Rooms	91.5	3.1	5.4	355	8.5
Appearance	90.7	6.8	2.5	355	8.4
Balcony Space	90.5	5.1	4.4	274	6.7
Sense of Privacy	87.7	4.2	8.1	357	9.0
Desired Number of Bedrooms	85.7	5.9	8.4	357	8.5
Front door at Street	85.6	6.9	7.5	319	7.0
Suitability for Household Needs	84.4	5.9	9.6	353	8.5
Ease of Maintenance	83.5	5.7	10.8	352	8.1
Good Ventilation	81.7	5.1	13.2	355	8.6
Arrangement of Rooms	81.2	6.2	12.6	357	8.4
No Noise/Adjacent Unit	76.9	7.9	15.2	355	8.8
Storage Space	75.9	5.6	18.5	357	8.1
Parking near Unit	75.1	8.3	16.6	313	7.4
Safety/Security	74.4	7.3	18.3	355	9.1
Private Yard	72.7	7.5	19.8	227	6.9
Feeling of Space	71.8	11.0	17.2	355	8.4
Ability to Change Unit	70.1	19.1	10.7	335	7.3
Energy Efficient	69.6	7.0	23.4	316	8.7
Front/Back Access	69.2	9.7	21.2	321	7.3
Large Rooms	60.8	15.2	23.9	355	8.0

Given the very high priority assigned to the twenty unit design features and the equally high degree of expressed satisfaction, the conclusion is that, for the most part, there was a good match between the design objectives and resident priorities, which has in turn translated into significant resident satisfaction. However, some factors identified from the neighbourhood features section reappear as possible problems: safety and security, and noise. Some new problems have also emerged where there is a lower correlation between satisfaction and importance—feeling of spaciousness, large rooms and energy efficiency. Two items have achieved high satisfaction scores although they were not rated of high importance: balcony space and front door at street.

5.3.4 Improvement

Respondents most frequently rated 14 of the 20 items as better at LeBreton than at their previous location (see Table 24).

TABLE 24

IMPROVEMENT OVER PREVIOUS UNIT
(RANKED)

	Better %	Same %	Worse %	Don't Know/ No Answer %
Appearance	57.2	28.5	13.0	1.4
Daylight in Rooms	56.6	29.9	12.1	11.4
Suitability for Household Needs	55.6	29.7	12.1	2.5
Arrangement of Rooms	54.1	28.5	16.1	1.4
Balcony Space	52.7	12.5	9.6	25.2
Storage Space	51.8	22.3	23.9	2.0

	Better %	Same %	Worse %	Don't Know/ No Answer %
Feeling of Space	50.4	22.5	25.4	1.7
Front Door at Street	47.3	32.1	10.7	9.9
Good Ventilation	46.6	35.3	16.9	1.1
Privacy	44.1	39.6	14.9	1.4
Energy Efficiency	43.6	22.4	17.6	16.4
Parking at Unit	42.1	28.1	16.0	13.5
Number of Bedrooms	39.4	44.8	13.8	2.0
Maintenance Ease	39.3	39.3	17.8	3.7
Safety/Security	37.1	39.7	20.4	2.8
Private Yard	36.5	9.3	21.5	32.6
Ability to Change Unit	35.5	43.1	14.6	6.8
Size of Rooms	33.5	28.5	36.6	1.4
Front/Back Access	32.4	32.4	23.4	11.8

5.3.5 Dissatisfaction and Improvement Ratings

It must be borne in mind that when sources of dissatisfaction where residents rated particular items as worse than in their previous housing are discussed, only a minority of residents are involved. For example, even the item rated as worse than in previous home most often--the size of rooms--was still satisfactory to 60.8% of residents. Since the degree of satisfaction with unit design features is so high, this discussion focuses on the four design items receiving the greatest percentage of ratings as "worse" than in the previous home: size of rooms (36.6%), feeling of spaciousness (25.7%), storage space (23.7%), and front/back access (23.4%).

Size of rooms was rated as worse most often by residents of parcels 5, 8, 9, and 10 and residents of parcel 5 and 8 were the least satisfied with this feature. The residents of these parcels share little in common that would help explain these findings. In fact, in terms of unit types, all types are represented: apartments, stacked units, and townhouses (with owner and renter occupants). However, parcel 5 contained the narrow front (3.66 m wide) townhouse units, which placed constraints on room size.

The sense of spaciousness of the LeBreton units was rated as worse by residents of parcel 5 only (39 residents). Thirty-six percent of these 39 parcel 5 residents were satisfied with this feature, 30.3% were dissatisfied and 34% were neutral. Dissatisfaction is still only expressed by the minority of parcel 5 residents. Since parcel 5 residents rate this item as worse, it could be related to the smaller dimensions of their 3.66-metre-wide townhouse units. However, they seem to be satisfied with other features of their units.

The reaction to storage space was mixed for residents of parcels 1, 2, 5, and 6: one half of the residents felt that the storage space was better than in their previous home and one half felt it was worse. However, lack of storage space did not influence satisfaction since the majority of all respondents in these four parcels were satisfied with this feature.

Of the 23.4% of respondents who rated their front/back access as worse, the majority live in parcels 2 and 10. Parcels 2 and 10

have similar arrangements for front and back access as parcel 7 and parcel 4 where they were rated better than in previous home, so the difference in response is difficult to explain. Parcel 2 is the only parcel where the majority of residents were dissatisfied (62.5%) with the front/back access.

As far as improvements are concerned, features such as "general appearance", "daylight in rooms", "suitability for household needs", and "arrangement of rooms" have had a positive impact on resident satisfaction.

5.3.6 Desired Change

Respondents were asked: "If you could, would you change any aspect of your unit?" (Question 17(a)). Although 73% of residents surveyed indicated a desire to make changes to their unit, the types of changes desired were entirely random, covered an extremely wide range of items, and no significant pattern emerged. The single item mentioned most frequently, noted by 8.0% (22 respondents), was installing carpeting.

5.3.7 Summary

- For the most part, there was a good match between design objectives at LeBreton and resident priorities which has translated into significant resident satisfaction.

- Some factors identified from the neighbourhood features section reappear as possible problems--safety and security, and too much noise. Some new problems have also emerged where there is a lower correlation between satisfaction experienced and importance rating--feeling of spaciousness, size of rooms and energy efficiency.

- Given the overall satisfaction with the design of the unit, and in light of the general trend towards improvement over previous experiences, we can conclude that LeBreton housing is extremely successful both in terms of the functional and qualitative components of unit livability.

5.4 Satisfaction with Open Space

To evaluate respondents' attitudes towards their private open spaces at LeBreton, the survey addressed satisfaction and improvement ratings for privacy, size and shape of this space, accessibility, maintenance requirements, residents' ability to watch children, safety and security, amount of sunlight, and residents' ability to carry out preferred activities in their outdoor space (see Question 22).

5.4.1 Privacy

Almost 65% indicated that privacy was extremely important (with a rating of 9 on a scale of 1-10) in providing useful private outdoor space. For the most part, respondents indicated that privacy was reasonably well achieved at LeBreton as compared with

their last place of residence: 34.5% indicated that privacy was "better", and 36.8% said it was the same. However, a substantial proportion (ranging from 21%-30%) of the respondents in most parcels indicated that the privacy achievable in their present outdoor spaces was worse than that achievable at their previous residence (22.5% overall stated that privacy at LeBreton was "worse"). The greatest dissatisfaction (3%) was recorded in parcels 1 and 7. Only in parcels 8, 9, and 10 did 80% or more indicate that the privacy achievable in their private outdoor space was the same or better than at their last residence.

In terms of satisfaction, 82.1% were satisfied or neutral with the privacy achieved in their outdoor space; 12.9% were not very satisfied and 3.9% were very dissatisfied with the lack of privacy achieved. The greatest dissatisfaction appears to be in parcel 1 where 38% of the respondents in that parcel were "not very satisfied" or "very dissatisfied" with the privacy in their outdoor space. Fifty-three percent of all the "very dissatisfied" responses regarding privacy in open space were from parcel 1 residents. In parcels 5 and 8, more than 20% of the respondents indicated some dissatisfaction with the privacy in their private open spaces. These findings could be attributable to the fact that parcel 1 is located at the corner of Albert Street and Booth Street, two busy thoroughfares, and the front yards are located close to the street; the backyards of parcel 5 are located on Albert St. and parcel 8 is located at the corner of Wellington Street and Preston Street, two arterial roads.

5.4.2 Size and Shape

With respect to size and shape of open space, very few residents noted that they were very dissatisfied (2 residents each in parcels 1, 6 and 10, and 1 in parcel 7). There was some dissatisfaction in parcels 5 and 7 where 27% and 26% respectively indicated that they were not very satisfied with the size and shape of their open space. For the most part (78%), respondents said they were satisfied or very satisfied (45% in parcel 9 were very satisfied).

5.4.3 Access

With regard to access to the private open space, there was a high degree of satisfaction, with 87% of all the respondents noting they were satisfied or very satisfied. However, in parcel 7, 27% of respondents noted that they were "not very satisfied" with the form of access to their private open space.

5.4.4 Maintenance

Parcel 7 residents also noted the greatest degree of dissatisfaction with respect to maintenance of the open space, with 40% of respondents indicating they were not satisfied with this aspect. By comparison, only 12% overall among all the respondents indicated some dissatisfaction with maintenance.

5.4.5 Surveillance of Children

When asked how satisfied they were with the open space with respect to surveillance of children, many respondents had no opinion or indicated that there was no problem with their yards or decks in this regard. The highest proportion of "not very satisfied" or "very dissatisfied" was registered in parcel 8 (32%). However, 62% in this parcel said they were satisfied or very satisfied.

5.4.6 Safety and Security

When questioned regarding safety and security, respondents in parcels 2, 8 and 10 expressed dissatisfaction. Overall, 14.8% indicated that they were concerned about safety and security in their private open space; 78% said they were satisfied or very satisfied.

5.4.7 Sunlight

Dissatisfaction with regard to amount of sunlight in the open space was minimal, with only about 7% of all the respondents noting some dissatisfaction; 44% said they were "very satisfied" and 43.5% said they were "satisfied".

5.4.8 Ability to Carry Out Desired Activities

About 10% of residents surveyed expressed some dissatisfaction with being able to carry out desired activities in the open space. Respondents noting dissatisfaction were concentrated in parcels 5, 7 and 8.

5.4.9 Improvement

In comparing their present open space with that provided in their previous residences, some respondents indicated that private open space at LeBreton was not as good as their previous residence with respect to privacy, and size and shape. About 20% of respondents felt that their homes at LeBreton were worse in one or both of these features as compared to their previous residences. In parcel 1, 32% of the respondents thought that their current open space was less private. With respect to size and shape, generally 20% of the respondents in each parcel considered their present open space smaller than the space they had in their last residence. Open space seemed to fare best in comparison to previous dwellings when compared on the basis of residents' ability to watch children at play.

5.4.10 Desired Changes

When asked if they would make any changes to their outdoor spaces, almost half of the respondents (48.6%) said they would. As a first choice, they indicated a desire to add shade or some roofed area (23.2% of respondents). This was particularly noted by residents in the ownership parcels 7 and 10.

As a second choice, respondents indicated a desire to enlarge their yards (14.3% of respondents). This was a strong response in parcel 8 with 50% of residents so reporting. Ten percent indicated they would like to increase privacy (parcels 2, 7 and 10) and 13% wanted to enclose their yard or add a gate, particularly in parcel 9 (22.2%).

5.4.11 Summary

- Approximately 82% of respondents were satisfied or neutral with the privacy achieved in their outdoor space. The greatest dissatisfaction appears to be in parcel 1 where 38% of the respondents were "not very satisfied" or "very dissatisfied" with privacy in their open space. Fifty-three percent of all the "very dissatisfied" responses regarding privacy in open space were from parcel 1 residents, and 32% of parcel 1 respondents thought that their current space was less private than their previous location. The fact that parcel 1 is located at the corner of Albert Street and Booth Street, two busy thoroughfares, and that the front yards of the units are close to the street, could account for the high dissatisfaction regarding privacy.

- Parcel 7 residents noted the highest degree of dissatisfaction with access to the outdoor space (27% "not very satisfied") and maintenance (40% "not very satisfied").

5.5 Private Yards and Balcony Space

5.5.1 Importance

All respondents have private yards, decks or balconies or a combination thereof; 60.5% of the respondents have a yard, 62.7% have a balcony and 20% indicated they have a deck. The private yard or balcony ranked high as an item considered important in choosing a home, with ratings of 6.9 and 6.7 respectively on a

scale of 1-10. About 45% of respondents ranked a yard as a very high priority feature when looking for a home. About 37% feel the same way about balconies.

5.5.2 Satisfaction

Questions regarding satisfaction were grouped to deal with yards or balcony space. Most residents were satisfied with their private yards or balcony space. Overall, 4.4% of all the respondents indicated they were not satisfied with their balcony space. More than 20% of the respondents in parcels 1, 2, and 7 were not satisfied with their yard space.

5.5.3 Improvement

With respect to rating their present private outdoor space in comparison with that provided by their previous dwelling, 36% indicated that their present yard was better and 52% said their present balcony was better; 21% said their yard was worse and only 9% said their balcony was worse. In parcels 2 and 10, the present yards were better than in the previous residence, with 70% and 60% of the responses respectively. Parcels 10 and 6 had the highest percentage (30%) of the respondents indicating their yards were worse. With respect to balconies, most respondents (76%) in parcel 4 indicated that their present balcony was an improvement. Despite the inner city location, private yards and balconies were provided that were rated better than in the residents' previous homes.

5.5.4 Use

Table 25 summarizes the response to Question 21(b) which asked, "I would like to know how often you use your yard/balcony/deck for certain activities."

TABLE 25

USE OF YARD/BALCONY/DECK IN ORDER OF DIMINISHING FREQUENCY

	Activity						
Yard	Socializing/ Entertaining %	Cooking/ Eating %	Sun- bathing %	Children's Play %	Gardening %	Storage %	Clothes Drying %
Often	22.6	32.4	27.6	13.1	38.7	8.8	14.8
Sometimes	44.8	34.3	35.0	19.7	22.6	13.9	6.0
Never	32.7	32.4	35.5	56.9	37.3	76.4	78.2
Don't know/ No answer	0.9	0.9	1.8	10.3	1.4	0.9	0.9
Balcony/Deck							
Often	24.3	20.6	26.2	9.5	19.1	5.6	5.6
Sometimes	55.1	36.0	34.1	16.7	26.6	14.3	13.1
Never	20.2	43.1	39.0	65.4	53.6	79.7	80.9
Don't know/ No answer	0.4	0.4	0.7	8.4	0.7	0.4	0.4

Respondents used their private yards, balconies, or decks for a wide variety of activities, and their choices were related to lifestyle or stage of family cycle. Parcels 3, 5 and 8 had the high responses for children playing (66.7%, 60.0% and 68.2%, respectively, said their yard was often used by children

playing). Parcel 10 had the highest response for sunbathing (42.9% said often). Parcel 3, which has yards for ground floor family units in an apartment building, by far exceeds the other parcels with respect to activities often carried out in the yard: 100% cook and/or socialize in the yard, 33% dry clothes in the yard, and 100% often do gardening (as compared with 38.7% overall).

In comparing the use of decks, 50% and 41% of the respondents in parcels 2 and 7 often use their deck to sunbathe and often cook on the decks (35.7% and 47.1% respectively). In parcels 2, 4 and 7, respondents indicated they often socialized on the deck. In 2, 5 and 7, respondents often did gardening on the deck; 35.7%, 42.1% and 52.9% respectively as compared with 19.5% overall.

5.6 Satisfaction with Way Finding

A priority at LeBreton was to provide residents with the maximum number of ground-related units within the prescribed densities. Where feasible, units have individual street addresses. However, to achieve this many units were clustered on internal mews streets. It was important to know whether this design concept developed to address one objective negatively affected another—the ease with which people unfamiliar with the area (visitors or delivery services) would find their way around the development. Respondents were asked, "Generally, do people often, sometimes, or never have difficulty finding your unit?" (Question 13(a)).

The majority of residents surveyed (54.4% or 193) reported that visitors had some degree of difficulty finding their units while the remainder reported no problems.

The root of the problem appears to be in the way units are numbered; 87% of respondents reporting wayfinding difficulties attributed the problem to poorly addressed units where the unit numbers were either not visible or were very confusing.

As illustrated in Table 26, difficulties with finding residents' units is related to particular unit types, with stacked townhouses posing the greatest problem.

TABLE 26

DIFFICULTY IN LOCATING UNIT

	OFTEN (%)	SOMETIMES (%)	NEVER (%)	TOTAL (N)
Stacked Townhouse	52	13	35	200
Townhouse	30	30	40	60
Apartment Building	13	17	70	87

5.7 Parking and Vehicular Use

5.7.1 Use

The patterns of car ownership and use were the subject of Question 10: (a) "How many motor vehicles do you and members of your household presently own?"; (b) "Is this an increase or decrease since moving to LeBreton?"

TABLE 27

RESPONDENT CAR OWNERSHIP

	%
No Car	31.1
One Car	60.2
Two Cars	7.8
Three or More Cars	1.8

TABLE 28

CHANGE IN CAR OWNERSHIP
SINCE MOVING TO LEBRETON

	%
No change in car ownership	80.0
Reduced number of cars	10.0
Increased number of cars	6.0

Thus, while the LeBreton location may be the same or better with respect to proximity to work, the downtown area or shopping in comparison to previous locations, this did not occasion a great reduction in car ownership, and a few residents may have taken advantage of improved parking arrangements to increase car ownership. The highest incidence of car ownership occurs in the ownership parcels 2, 7 and 10 where 82% or more of the households surveyed had one or more cars. Residents with two cars occur in all parcels except parcel 3. The highest percentage of two-car households occurs in parcels 2 (21%) and 1 (18%).

Residents surveyed were asked, "The following is a list of several kinds of activities that you might be involved in. Could you please tell me your main method of travel for each activity

or destination: (a) work; (b) visiting friends; (c) grocery shopping." (Question 6). Table 29 contains the findings.

TABLE 29

METHOD OF TRANSPORTATION
(%)

	Travel to Work (301)	Visit Friends (349)	Grocery Shopping (349)
	%	%	%
Public Transit	40.9	26.9	18.1
Vehicle	32.9	58.7	62.5
Walk	22.3	8.3	11.7
Other	4.0	6.0	7.7

The breakdown of main method of travel to work is fairly consistent across the parcels except for parcel 9 (senior citizens). A comparison of modes of travel to work by type of tenure indicates that 45% of those who own their homes walk to work. This is relatively high as compared with co-op and non-profit rental which showed 12% and 18% respectively of these respondents walking to work. From these figures, it is reasonable to suggest that, of "location factors", proximity to work was significant in the choice of the LeBreton neighbourhood amongst homeowners.

The mode of travel for visiting friends was significantly different. There was considerable variance between parcels. For example, 92% of the respondents in parcel 10 drove to visit friends, while 43% in parcel 6 usually drove. Those that walked

to visit friends were most predominant in parcels 4, 5 and 7, where 15%, 18% and 17.4% respectively of the respondents indicated that they usually walked when they went to visit friends. While respondents indicated high use of automobiles for going to visit friends, only 6.8% indicated that they were very dissatisfied with their location with respect to the location of their friends.

For grocery shopping, 62.5% of the residents surveyed indicated that they travelled by car. They indicated greater dissatisfaction with the location with regard to proximity to shopping than to work.

5.7.2 Change in Modes of Transportation from Previous Location

The majority of residents surveyed indicated that their mode of transportation has not changed since their move to LeBreton. Sixty-eight percent of respondents report no change in travel to work; 78.5% report no change in travelling to visit friends; and 76.3% report no change in transportation used for grocery shopping.

5.7.3 Parking Location and Satisfaction

On the average, 70% parking space was provided for LeBreton residents. Each townhouse unit was provided with one parking space. One visitor parking space was allocated for each ten units. The responses suggested that parking strongly affects satisfaction with housing, as 40.5% indicated that parking near

the unit was extremely important when looking for accommodation. Only twenty-five respondents (7%) indicated that parking was "not at all important."

In comparison with previous locations, 42% indicated that their current parking arrangement was better, 42% reported it was the same and only 16% indicated it was worse.

Respondents were asked, "Are you generally satisfied with the parking arrangement for residents at LeBreton Flats?" (Question 12(a)) and, "Are you generally satisfied with the parking arrangements for visitors at LeBreton Flats?" (Question 12(b)). The interviewed residents were more dissatisfied with visitor parking than with resident parking, with 29.7% registering dissatisfaction with resident parking and 63.5% indicating that they were not satisfied with visitor parking.

Dissatisfaction with resident parking was most pronounced in parcels 3 and 10, where almost 50% were dissatisfied. Insufficient space ranked highest as the reason for dissatisfaction, noted primarily in parcels 5, 8 and 9. Others, including those in parcels 3 and 10, indicated that they were dissatisfied because parking was abused or spaces were too small.

The main problem indicated with regard to visitor parking was that it was insufficient (93.4%). Almost 92% of the respondents in parcel 8 noted dissatisfaction with visitor parking. Dissatisfaction in parcels 2, 4 and 9 also was high, with 75% or more of the respondents in each of these parcels indicating

dissatisfaction with visitor parking. The highest level of dissatisfaction was recorded in parcel 2 (78.6%).

Respondents were asked to indicate where they "often" parked (Question 11). The following summary lists the findings for the entire LeBreton development for the first car and then is further broken down by parcel.

TABLE 30

LOCATION OF MOST FREQUENT PARKING AT LEBRETON ACROSS PARCELS*
(242)

		% of Parcel (N)									
	Total %	1 (22)	2 (12)	3 (20)	4 (16)	5 (23)	6 (26)	7 (19)	8 (15)	9 (43)	10 (46)
Driveway/ Front of unit	62.8	63.6	100.0	10.0	100.0	52.2	65.4	100.0	33.3	32.6	89.1
Surface area inside parcel	31.8	36.4	-	70.0	-	47.8	19.2	-	60.0	65.1	4.3
Visitor parking area	0.8	-	10.0	-	-	-	-	-	-	-	-
Street	1.7	-	-	-	-	-	7.2	-	6.7	2.3	-

* multiple response yields column totals exceeding 100%

Residents parking in the visitor parking area is a source of some concern as 83% of the households (27) with more than one car at least sometimes park a second car in the visitor parking area. This compares with 13% who sometimes park their first car in the visitor parking area. Problems with the amount of visitor parking may be particularly aggravated by the parking habits of two-car households.

5.7.4 Summary

- The finding that 45% of respondents who own their homes walk to work indicates that of "location factors", proximity to work was significant in the choice of the LeBreton neighbourhood amongst homeowners.

- The dissatisfaction with visitor parking expressed by the respondents was pronounced, with 63.5% indicating that they were not satisfied. Of the dissatisfied respondents, 93.4% cited insufficient parking as the reason for their dissatisfaction.

- Residents parking their first car (13%) and second car (83%) in the visitor parking space aggravates resident dissatisfaction with visitor parking space.

5.8 Acoustical and Visual Privacy

5.8.1 Introduction

The following design features were implemented at the parcel and unit level at LeBreton Flats to facilitate acoustical and visual privacy for residents.

i) Parcel

- mews court planning with one vehicular and pedestrian entrance to limit non-resident intrusions
- pedestrian routes flowed into city sidewalks to reduce the number of across-parcel intrusions and traffic
- prohibited semi-public pathways behind yards to limit intrusions

- constructed traffic noise attenuation systems along the north edge of the site
- encouraged the use of barrier-type buildings along the north edge of the site to reduce traffic noise and leave interior court areas free of noise

ii) Unit

- used higher grade noise attenuating party walls between adjacent units and floor constructions between stacked units
- reduced overlooking between stacked units
- ensured units were provided with private amenity space and prescribed 1.8 m. high enclosures around outdoor living areas at grade
- encouraged use of privacy screening in outdoor living areas above grade
- use of staggered floor design (8 prototypes and parcel 10) to permit simultaneous but potentially conflicting family activities

5.8.2 Importance

Respondents were asked to rate the privacy variables on a scale of 1-10, with 10 being the highest priority rating (Question 18(c)). The residents' ratings of importance indicated that all six privacy variables were high priorities. Mean ratings ranged from 7.79 for privacy from people passing by to 8.87 for no disturbance from noise from adjacent units.

Although these finding repeat previous unit-specific questions, an attempt was made through detailed questions and subsequent analysis to determine more specific items causing resident dissatisfaction.

5.8.3 Improvement

Table 31 documents the improvement in acoustical and visual privacy over their previous location.

TABLE 31

ACOUSTICAL AND VISUAL PRIVACY
IMPROVEMENT OVER PREVIOUS LOCATION

	Better %	Same %	Worse %	Don't Know/ No Answer %
Freedom from noise from adjacent unit	42.6	36.6	19.0	1.7
Privacy from outdoor areas	34.5	36.8	22.5	6.3
Freedom from noise outside unit	28.7	41.5	29.3	0.6
Freedom from traffic noise	27.6	28.4	43.2	0.9
Privacy from people passing by unit	27.6	50.0	18.8	3.7
Privacy from people across from residents (overlooking)	25.9	44.0	23.9	6.3

5.8.4 Satisfaction

Respondents' satisfaction with acoustical and visual privacy (see Question 18(a)) in order of diminishing frequency is summarized in Table 32.

TABLE 32

SATISFACTION WITH ACOUSTICAL AND VISUAL PRIVACY
(RANKED)

	Satisfied %	Neutral %	Dissatisfied %	Total (N)
Privacy from People Passing by Unit	84.2	7.2	8.6	(346)
Freedom from Noise from Adjacent Unit	78.9	6.8	14.4	(355)

	Satisfied %	Neutral %	Dissatisfied %	Total (N)
Privacy from People Across from Residents (Overlooking)	73.1	10.7	16.3	(338)
Privacy from Outdoor Areas	70.8	12.2	17.0	(353)
Freedom from Noise Outside Unit	62.8	11.3	25.9	(355)
Freedom from Traffic Noise	52.0	11.0	37.1	(356)

The relatively high amount of resident satisfaction expressed regarding the privacy afforded at LeBreton was further reinforced when residents were asked, "Have you done anything to give you more privacy?" (question 20(a)). The majority of residents (78.7%) had made no alterations to improve their privacy. Of the 76 people who had made changes, the major alteration had been to add curtains or blinds (46%).

Given the relatively high degree of satisfaction with the visual privacy between units, more detailed analysis focused only on the two acoustical aspects receiving the lower satisfaction scores: traffic noise disturbances and disturbance from noise outside the unit. The analysis was carried out on a parcel by parcel basis in an attempt to determine precisely where dissatisfaction was most frequently reported. Table 33 contains a comparison of satisfaction with these two features across the ten LeBreton parcels.

TABLE 33

SATISFACTION WITH TRAFFIC NOISE/
NOISE OUTSIDE UNIT BY PARCEL

	PARCEL										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %	Total (N)
No Traffic Noise											
Satisfied	32.4	28.6	44.7	59.3	63.6	67.4	87.0	29.2	34.9	65.3	(181)
Neutral	8.8	21.4	15.8	7.4	24.2	6.5	-	20.8	9.5	6.1	(39)
Not Satisfied	58.8	50.0	39.5	33.3	12.1	26.1	13.0	50.0	55.6	28.6	(131)
No Noise Outside Unit											
Satisfied	41.1	71.2	65.8	63.0	54.5	65.2	69.6	58.3	61.3	75.5	(220)
Neutral	5.9	7.1	10.5	18.5	18.2	13.0	8.7	20.8	9.7	6.1	(40)
Not Satisfied	50.0	21.4	23.7	18.5	27.3	21.7	21.7	20.8	29.0	18.4	(90)

5.8.5 Summary of Satisfaction Levels

The results of the analysis of satisfaction and dissatisfaction with traffic and outside noises suggest first that the majority of residents are satisfied. The dissatisfaction that the survey reveals is directly related to living along the edge of the Wellington Street arterial. We can conclude that it is questionable whether or not the acoustical privacy expectations of LeBreton residents living closest to the traffic noise source have been met.

5.8.6 Source of Noise and Degree of Annoyance

To gain a more comprehensive understanding of "noise" at LeBreton, the survey attempted to qualify the source and frequency of other types of noise in addition to traffic noise.

Two factors measured in an attempt to qualify any problems residents have with noise: source of sound and the degree to which respondents were annoyed (see Question 19). The degree of annoyance was an important measure of the seriousness of the noise problem. It was anticipated that the two measures, source and annoyance level, would provide a more accurate evaluation of the effectiveness of sound attenuation efforts and of the standards that exist since they were met.

Seven types of noises, and those most commonly complained about were evaluated. These particular sounds were also chosen because they represent different types of sound and frequencies which may or may not have been accommodated by the attenuation systems selected. Table 34 lists the seven types of noises and degree of annoyance reported by residents surveyed.

TABLE 34

DEGREE OF ANNOYANCE WITH NOISE
(N = 357)

Type of Noise	A Great Deal	A Little	Not at All	Don't Know
	%	%	%	%
People walking	2.6	6.8	90.0	0.6
Cupboard closing	2.3	10.6	86.2	0.9
Children playing	6.0	19.1	73.5	1.4

Type of Noise	A Great Deal	A Little	Not at All	Don't Know
	%	%	%	%
Stereo music	11.1	23.9	64.4	0.6
Road traffic	32.0	31.7	36.3	-
People talking	4.0	12.0	83.8	0.3
Plumbing	12.3	20.5	67.0	0.3

This breakdown of the major types of noise annoyance found traffic noise to be the most significant problem.

A more detailed analysis of the traffic noise data was carried out to examine whether any significant difference existed between specific parcels. Since certain parcels are closer to the actual source than others, the influence of location on degree of annoyance was examined.

TABLE 35

ANNOYANCE WITH TRAFFIC NOISE ACROSS PARCELS
(N = 357)

	PARCEL										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %	Total %
A great deal	41.2	46.2	44.7	33.3	27.3	19.6	4.3	41.7	41.3	22.4	32.0
A little	26.5	46.2	26.3	29.6	36.4	17.4	34.8	37.5	44.4	26.5	31.7
Not at all	32.4	7.7	28.9	37.0	36.4	63.0	60.9	20.8	14.3	51.0	36.3

Traffic noise annoyance measured within and across groups, is more significant in parcels 1, 2, 3, 8 and 9. At least four of these parcels are also located along the north edge of site, closest to a major source of traffic noise from the Wellington Street arterial.

5.8.7 Summary

- The majority of respondents were satisfied with the amount of acoustical and visual privacy at LeBreton. Dissatisfaction voiced by respondents regarding traffic noise is directly linked to living along the edge of the Wellington arterial (parcels 1,2,3,5,8 and 9).

- One might conclude that as obviously successful as the sound attenuation efforts were for solving between unit noises, especially for sounds in the more problematic frequency ranges, such as stereo music, the traffic noise attenuation strategies have been less successful.

6.0 ENERGY CONSERVATION

6.1 Introduction

The LeBreton planners implemented the following measures at the site and unit level to satisfy the demonstration objective of conserving energy.

i) Site Level

- division of site allowing for corridors of sunlight penetration
- location of taller structures determined to minimize shading and maximize barriers to northerly winds along the north edge of the site
- strategic siting maximized southern orientation

ii) Unit Level

- insulation standards RSI 5.7 and 3.5 for roofs and exterior walls respectively
- through-unit ventilation
- double glazing (triple recommended)
- recommended 70% of glazing oriented to SSE to SSW sectors
- efficient heat generation and distribution systems: gas-fired required
- night setback thermostats and two-zone redistribution systems
- energy saving toilets and showerheads (parcel 6)
- solar domestic hot water heaters (8 prototypes)
- thermal shutters (parcel 6, 2 units only)
- individual meters (6 parcels)
- district heating system (4 parcels, 200 units)

The intent of the energy-related portion of the evaluation of LeBreton Flats by residents was to establish the level of satisfaction with energy performance in general and to draw conclusions regarding consumer awareness of and satisfaction with the energy conservation efforts and devices implemented at LeBreton Flats.* Feedback on the following issues was of particular interest:

- residents' satisfaction with their ability to control and regulate energy consumption;
- resident satisfaction with energy costs;
- resident satisfaction with mechanical devices where installed and whether those who have such devices are more, less or equally satisfied with energy performance than those without such devices;
- a comparison of satisfaction with energy performance between those served by the district heating system and those on a conventional heating system; and,
- whether there are any unintended consequences of steps taken to maximize solar gain opportunities; specifically, is uneven heat distribution in parts of the unit a problem?

User satisfaction was measured on the basis of five energy performance variables which corresponded to major areas of interest:

- How well temperature could be regulated
- Evenness of heat in different rooms
- Costs
- Ability to control amount of energy consumed
- Service and maintenance

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* See also "LeBreton Flats Development Evaluation 5 - Energy Conservation Features." Ottawa: Canada Mortgage and Housing Corporation, 1982. NHA 5543

On the premise that awareness of conservation efforts and features might influence expectation of performance, a two-stage awareness test was devised. First, respondents were asked, "Are you aware of any features about your unit which are intended to reduce the amount of energy your family uses?" (Question 29(b)). Respondents were then asked, "Could you tell me what those features are?" (Question 29(b)). Next, they were asked, "Do you have any of the following items in your unit: (a) individual heating controls; (b) individual consumption meters; (c) triple glazing; (d) additional insulation; (e) efficient gas furnaces; and (f) water-saving devices?" (Question 29(c)). Features (a) and (d) were prescribed by CMHC for all units while the remaining features were encouraged and expected to appear randomly across the site.

A question was also devoted to verifying the presence of "special" energy saving features such as night setback thermostats and two-zone air re-distributions system (see Question 31(b)). As a further test of both energy performance and unintended consequences, residents were provided an open-ended opportunity to tell us whether they did anything special to affect the temperature of their unit (see Question 32(a)).

6.2 Respondents' Awareness of Energy-Conserving Features

When asked if they were aware of features about their unit which are intended to reduce the amount of energy their household uses, 56.7% of respondents indicated they were. No distinctions can be made on the basis of tenure, since owners, renters and co-op

residents are fairly equally aware of energy conservation efforts. However, respondents in certain parcels within the tenure groups categories appear more aware than their neighbours. Based on parcel designation the following pattern emerges:

TABLE 36

AWARENESS OF ENERGY-SAVING FEATURES ACROSS PARCELS (UNAIDED)
(N = 357)

	PARCEL										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %	Total (%)
Yes	38.2	42.9	44.7	88.9	69.7	51.1	87.0	50.0	26.6	89.8	56.7
No	61.8	57.1	55.3	11.1	30.3	48.9	13.0	50.0	73.4	10.2	43.3

The following may offer some explanation for the higher awareness levels in parcels 4, 7 and 10:

- Parcel 4 (Laidlaw Co-operative) members participated extensively in the design and planning of their units and energy conservation was given a high priority by the group.

- The developers of parcels 7 and 10 (both ownership) believed energy-conservation features added to the marketability of the units and stressed them during marketing phases.

Table 37 contains respondents' awareness of specific energy savings features, both unaided and aided. The breakdown of features that residents listed unprompted were generally features

the average consumer would be most aware of and concerned about (i.e., individual controls, efficient furnaces and insulation), but they were generally lower than the actual figures.

TABLE 37

AWARENESS OF ENERGY-SAVING FEATURES
(AIDED/UNAIDED)

	Unaided	Aided		
	Yes %	Yes %	No %	Don't Know %
Individual Controls	16.8	73.0	9.7	0.6
Consumption Meters	6.0	63.6	24.1	6.3
Efficient Furnaces	13.9	35.5	29.8	20.7
Insulation	21.1	11.1	28.8	39.0
Water-Saving Devices	4.0	19.7	57.0	19.4
Triple Glazing	4.3	8.6	56.6	30.6

Of the five energy-conserving features of interest, the majority of people reported having individual heating controls (73.0%), although all units were provided with them. While the percentage of people who reported having triple glazing is higher than the actual presence of this feature at LeBreton, the number of people reporting having additional insulation is far below the actual figures: in fact, higher grade insulation standards were applied at LeBreton for both roof and exterior wall areas.

Further analysis is based on residents statements regarding the presence of these features. For distribution of these features at LeBreton, see Table 2.

6.3 Satisfaction

Respondents were asked, "How satisfied are you with the following aspects of the heating in your unit?" (Question 30). Table 38 presents the different classifications.

TABLE 38

SATISFACTION WITH ENERGY PERFORMANCE

	Satisfied %	Neutral %	Dissatisfied %	DK/NA %
Ability to regulate temperature	64.5	5.1	28.4	2.0
Evenness of Heat	46.4	6.3	45.0	2.3
Costs	37.1	10.0	18.8	34.2
Ability to control consumption	63.7	8.9	17.7	9.7
Service and Maintenance	55.0	7.5	22.4	15.0

Several factors could account for the high percentage of respondents who answered "don't know" when asked how satisfied they were with costs:

- Since the length of occupancy at LeBreton varies from under six months to two years or more, a lack of experience with a complete heating season could be accountable.

- The respondents may not be responsible for paying utility bills and therefore have less knowledge of heating costs.

- Groups may be paying utility bills collectively rather than on an individual basis; 50% of respondents are not billed directly.

When satisfaction with cost responses are recalculated controlling for the "don't know" responses, 56.4% of residents are satisfied. When "don't know" responses are controlled across all five variables, residents are **most satisfied** with their ability to control consumption (69.9%) and **least satisfied** with evenness of heat in rooms (47.2%).

Although the majority of respondents are more satisfied than dissatisfied with heating aspects, the level of dissatisfaction on specific variables such as evenness of heat, ability to regulate temperature, and control consumption were significant enough to warrant further analysis.

6.3.1 Satisfaction Based on Having Selected Features

The next phase of analysis examined the relationship between having the energy-conservation features and satisfaction with the five aspects of heating. While no specific hypothesis was proposed by the LeBreton planners regarding the effect of features such as insulation, triple glazing and efficient furnaces on consumer behaviour, there were expectations that individual controls and consumption meters would influence resident satisfaction with ability to control energy consumption and ability to maintain heating levels according to personal needs.

The results of the analysis revealed that the majority of respondents, both those who said they had and those who said they did not have these features, were relatively satisfied with the five aspects of heating with one major exception: evenness of heat in rooms. (Every resident has individual controls, and all residents except those on district heat have consumption meters, 42% and 46% of those having and not having consumption meters were dissatisfied.) However, those respondents who had a particular energy-related feature expressed greater amounts of satisfaction with four of the five heating aspects than those not having these features. The one exception to the findings related to satisfaction with the cost of heating is for those who said they had an individual consumption meter. Here, those not having the meter feature were slightly more satisfied than those having it (60% versus 57.6% respectively).

TABLE 39

PERCENT SATISFIED WITH ENERGY PERFORMANCE BASED ON HAVING SELECTED FEATURES

	Efficient Furnace		Additional Insulation		Individual Meters		Triple Glazing	
	With (171)	Without (110)	With (113)	Without (101)	With (244)	Without (85)	With (44)	Without (198)
Ability to Regulate Temperature	74.9%	51.9%	79.6%	54.5%	68.0%	60.0%	71.1%	64.4%
Evenness of Heat	46.7	40.0	51.8	37.0	48.3	46.7	50.0	42.9
Costs	63.4	51.9	72.9	56.3	57.6	60.0	66.7	56.1
Ability to Control Consumption	78.9	54.1	84.3	54.7	76.2	54.5	85.7	65.9
Service and Maintenance	78.7	46.8	78.4	51.2	66.8	63.4	66.7	63.5

The most pronounced effect of believing that they have the energy features, particularly, individual meters, additional insulation, efficient furnaces and triple glazing, seems to be on the amount of expressed satisfaction with one's ability to control energy consumption—an effect predicted by the LeBreton planners.

Interestingly, this increased satisfaction with the ability to control consumption does not translate into similar increases in satisfaction with costs. Although those who said they have the energy-conservation features were generally more satisfied with costs than those without the features, the differences rarely exceed 10% between the two groups in terms of amount of expressed satisfaction.

Another variable which was felt to have a potential influence on the assessment of energy performance, especially costs, was income. An analysis of responses based on household incomes revealed that:

- The degree of satisfaction with one's ability to regulate the temperature was greatest amongst the higher income groups (over $30,000 per annum). Satisfaction was lowest among lower income groups and the majority of very low income earners were dissatisfied.

- Satisfaction with evenness of heat in rooms and annual income were inversely related; as income increased, satisfaction decreased.

- The relationship between satisfaction with costs and household income tended to be positive, although the majority of all income groups were satisfied. The exception to this trend were those earning between $25,000 and $29,999 per annum, where the significant majority of respondents were dissatisfied with heating costs.

While the majority of both those who perceive having and not having the energy features are satisfied with the five aspects of heating, there is a trend in these data for respondents who believe they have the features to be significantly more satisfied with the energy performance of their units. It is, however, notable that the general trend of lower amounts of satisfaction with the evenness of heat in the rooms is not offset by having particular energy-related features.

6.4 Additional Energy Saving Technologies

LeBreton developers had also been encouraged to consider two additional energy-saving technologies when feasible: a forced air two-zone distribution system designed to circulate heat evenly throughout the unit (from warm to cooler areas) and a relatively inexpensive setback thermostat for adjusting temperatures downward during evening and absent hours. Table 40 contains the presence of set back thermostats and two zone distribution systems according to tenure as reported by respondents.

TABLE 40

PRESENCE OF SET-BACK THERMOSTAT
TWO-ZONE DISTRIBUTION SYSTEM ACROSS TENURE TYPES
AS REPORTED BY RESPONDENTS

	Total	Renter	Non-Profit Co-op	Owner	(N)
Set-back thermostat	50.6%	53.2%	17.1%	30%	178
Two-zone distribution system	58.0	41.2	33.3	26	207

6.5 Satisfaction

Once again, satisfaction with evenness of heat in rooms is the lowest for both groups when compared to satisfaction with other performance variables. Alternatively, since satisfaction with the evenness of heat is generally low across the two groups and dissatisfaction is relatively high, and since it scores lowest on satisfaction even behind energy costs, it can be seen to be the most significant energy-performance related problem found in the study.

Respondents who said they had the two devices were asked if the device worked properly (Question 31(b)). Seventy-four percent of respondents felt the thermostat device worked properly and 63% felt the two-zone distribution system functioned well. Since the majority of users have had a favourable experience with the devices, satisfaction can be taken to relate to the perceived influence on energy performance.

6.6 Conventional Heating/District Heating Systems

Comparisons were made between the responses of residents having district heating (i.e., central furnace; heating costs are included in the rent), conventional heating systems (i.e., individual furnace; residents receive monthly feed-back on usage) and satisfaction with the five energy performance variables. Table 41 provides a breakdown of results for both systems.

TABLE 41

SATISFACTION WITH HEATING PERFORMANCES
DISTRICT HEATING AND CONVENTIONAL SYSTEM

	SATISFIED (%)		DISSATISFIED (%)	
Performance Variable	DH	CS	DH	CS
Ability to Regulate Temperature	51.2	73.8	42.4	21.7
Evenness of Heat	48.8	46.7	44.0	47.6
Costs	45.1	62.8	34.6	25.5
Ability to Control Consumption	55.8	78.4	33.7	12.5
Service/ Maintenance	56.7	70.6	31.6	22.2

DH - District Heat

CS - Conventional System

More respondents stating that they had the conventional system of heating were satisfied with all the measures used than respondents stating they were supplied with district heat.

6.7 Unintended Consequences

As an indicator of any unintended consequences of steps taken to maximize solar gain opportunities in particular, residents were asked if they did anything special to affect the temperature of their unit (see Question 32(a)). Behavioural responses to overheating in some parts of the unit would signal a problem.

Forty-seven percent of respondents noted that they did something to affect the unit temperature.

These respondents were then asked what they did to affect unit temperature (see Question 32(b)). Half of the responses related to conservation behaviour, and half related to behaviours intended to cool the unit.

6.8 Summary

- The majority of respondents, both those stating that they had or did not have energy-saving features, were relatively satisfied with all aspects of heating with one major exception: evenness of heat in rooms, which can be regarded as the most significant energy-performance related problem found in the evaluation.

- The most pronounced effect on residents believing they had the energy features seems to be the amount of expressed satisfaction with ability to control energy consumption. It should be noted that this satisfaction does not translate into similar increases in satisfaction with costs.

- Residents in the municipal non-profit rental units proved to be the least satisfied and most dissatisfied with all five aspects of their energy performance. As a group, they were most dissatisfied with the evenness of heat in their homes and then with service and maintenance aspects. The municipal non-profit residents also expressed the greatest amount of dissatisfaction

with the costs of their heating when compared with the other tenure groups.

- With the exception of satisfaction with evenness of heat, respondents on a conventional heating system registered greater satisfaction and less dissatisfaction with heating performance than residents on a district heating system.

7.0 CONCLUSIONS

7.1 General Satisfaction With and Awareness of Features

At the outset, we should note that with an effective response rate of 83%, the user evaluation response not represents the opinions of the universe of LeBreton respondents.

The overall satisfaction rate of 89.5% expressed by respondents indicates that the design solutions proposed to satisfy the demonstration objectives of LeBreton planners are generally acceptable and satisfactory to LeBreton residents.

Also, a fairly high level of respondents (46%) were aware of specific features of the development which they perceived contributes to their satisfaction.

7.2 Reasons for Moving to LeBreton

Respondents' primary reasons for choosing to live at LeBreton were seen to reflect their major reasons for leaving their last address: a better location (61%); more affordable costs (37%); and design and appearance (33%).

7.3 The Balanced Community

7.3.1 Demographic Profile

The demographic profile of respondents indicates that a wide range of household types, age groups, tenure options and income groups have been successfully housed at LeBreton. The survey

revealed that just over a third of the households (38%) were families with children. Only thirty-two percent of the households were couples without children.

The survey found that families with children are most often accommodated by the non-profit rental sponsor groups (70.5%). And, as anticipated, the largest proportion of lower and moderate income groups are accommodated in housing sponsored by the municipal non-profit developer groups (44.7%). Single-person households are most commonly housed in the Tompkins Housing Seniors Co-op and in the apartment units provided by Centretown Citizens' Corporation. Also, as predicted, the high income earners are, for the most part, owners (58.3%).

Although social mix targets set to achieve the objective of a balanced community were approached, the survey found that the number of low, moderate and middle income households were below target. Conversely, the percentage of higher income households exceeds the original target.

7.3.2 Affordability

The majority (72%) of LeBreton respondents found their housing costs to be either within the expected range or less than anticipated.

The 23% of respondents who found housing costs more or a lot more costly than anticipated most often attributed the additional unexpected costs to one of the following reasons: rent increases since moving in (47.8%); heating costs (27.0%); or expensive rent

(25.6%). However, few people were planning to leave LeBreton (3%). Most of these were lower income renters. These findings suggest if rental or heating costs rise, retaining the lower income rental groups could be a problem.

7.4 Qualitative Impact of Social Mix

7.4.1 Satisfaction

LeBreton residents were found to be keenly aware of the mixed nature of their community and the majority (79.0%) are satisfied with the social mix.

7.4.2 Neighbourhood Boundaries

The finding that 53.5% of the respondents define their neighbourhood in terms of the larger Dalhousie neighbourhood suggests that the objective of integrating the existing Dalhousie and the new LeBreton community has been achieved.

7.4.3 Interaction Patterns

The majority of residents are continuing to interact with their friends outside of LeBreton most frequently--a quite understandable finding given that the majority of residents (68.3%) had moved to LeBreton from either downtown Ottawa or other areas of the city. Where interaction occurs at LeBreton, it takes place between residents living closest to each other—again an unexpected finding.

7.4.4 Cooperative Membership and Interaction

The noteworthy finding regarding social interaction patterns is the differences in interaction found among co-op members as compared with either renters or owners. Co-op residents not only report knowing more friends next door and within their parcels, but they are also the most satisfied about their opportunity to socialize, and report the most improvement over their previous experience. We feel that these findings may be related to the extent residents were involved in the design of their units and the extent of their current involvement in decision-making at LeBreton: co-op residents were not only very involved in the design and planning of their units, they are also currently more involved in decision-making at LeBreton.

7.5 Satisfaction with the Neighbourhood, Parcel and Unit Design

7.5.1 Neighbourhood

Residents were generally satisfied with all but three of the 17 neighbourhood features: the amount of noise, the LeBreton neighbourhood as a place to raise children, and the lack of good schools. They were clearly most satisfied with the advantage of being close to downtown (93.8%), to parks (90.6%), and to work (89.9%), with the good public transportation in the area (93.9%), and with the pleasing appearance of the LeBreton neighbourhood (82.3%). The relationship between the degree of satisfaction and the assessments of improvements over past residences was positive: items which people are most satisfied with tend to be those demonstrating the greatest improvement over previous experiences.

Residents are also particularly pleased with the number of children in the area and with the sense of spaciousness provided at LeBreton. These last two features are frequently found to contribute to dissatisfaction with higher density residential development and appear to have been handled successfully at LeBreton.

The major sources of concern at LeBreton , evidenced by the amount of expressed dissatisfaction, are the amount of traffic in the area (38.2%), and the amount of noise (30.3%). Dissatisfaction with these two items was higher than for any other attribute, including safety from crime. Once again, the relationship between dissatisfaction and degree of improvement over past housing was direct: items which residents found most dissatisfactory were rated as worse at LeBreton than in the previous setting. It must be noted that traffic noise is a necessary condition of inner city living and LeBreton respondents have been willing to tolerate traffic noise in exchange for a preferred location. The finding that the majority of residents have relocated from downtown Ottawa or other City of Ottawa areas rather than from suburban settings, and are therefore presumably accustomed to street noise, augments the severity of this problem. However, the high general levels of satisfaction point to the fact that such medium density developments in inner city locations can provide many attractive features that override the problem of traffic noise.

7.5.2 Safety and Security

There was no evidence of personal safety or security concerns amongst respondents during the day since 98.9% reported feeling safe. At night, however, 33.7% of the respondents reported feeling unsafe; of this percentage, 79% were female. Evidence of surveillance for strangers among the LeBreton residents shows that small parcel design enhances group identity and member recognition. The greatest evidence of watching out for strangers within the particular parcels was found among the most active co-op group—Laidlaw Co-op, where 100% of residents surveyed watched for strangers.

7.5.3 Recreation Spaces

Although use of the park is relatively low (52% make use of it), a very high priority rating (8.0) and correspondingly high satisfaction levels (90.6%) suggest that it makes an important contribution to residents' overall satisfaction with their neighbourhood.

7.5.4 Location of Children's Play

The inside mews area, serving only resident traffic, was intended to serve also as a safe play area for children, where parents could easily watch over them from their units. Over a third of the children (mostly young children) played in front of the unit or in the driveway. Few respondents (6%) complained about the noise of children playing. However, older children did play in

the visitor parking area, which could be a problem. Over half of the families with children reported that their children played in the park (61%).

7.5.5 Unit Design

Given the very high priority assigned to all the unit design features and the equally high degree of expressed satisfaction, the conclusion is that for the most part, there was a good match between the design objectives and resident priorities which has in turn translated into significant resident satisfaction. With good design, multiple housing developments are acceptable to a variety of consumers, regardless of tenure.

The same factors identified from the neighbourhood features section as possible problems reappear—safety and security and noise. Some new problems also emerged where there is a lower correlation between satisfaction experienced and the importance rating--feeling of spaciousness, size of rooms, and energy efficiency.

7.5.6 Private Yards and Balcony Space

The private yard or balcony ranked high as an item considered important when choosing a home. Ninety-one percent of respondents are satisfied with their balcony space and the majority rated it as an improvement over their previous home. Seventy-three percent of respondents were satisfied with their private yard and 36% rated it as better than before. Both the

privacy and functional aspects of these outdoor spaces received very high ratings. Desired changes, as a measure of acceptability, referred to adding shade as a first choice and enlarging the space as a second choice. Owners tended to desire more privacy in these spaces and 47 people wished to enclose their yard or add a gate. Interestingly, 14 of these 47 residents were residents of parcel 9, where the requirement for 1.8 m high enclosure was relaxed at the request of the sponsor.

Despite the density of housing, residents carry out a variety of activities satisfactorily within private amenity spaces in relative privacy.

7.5.7 Ground Orientation

A significant majority of residents were satisfied with the access to grade provided by their unit and this feature was assigned a high rating when choosing a home (7 out of 10). The arrangement of these ground-oriented units around the mews court has, however, created some wayfinding problems for visitors to the area. The root of the problem appears to be poorly addressed units, where unit numbers are either not visible or are confusing to the uninitiated. The greatest difficulty with wayfinding was reported by people in the stacked townhouse units.

7.5.8 Parking

The significant majority of respondents are satisfied with the amount of parking, but are dissatisfied with visitor parking

arrangements. Dissatisfaction with resident parking was most notable among residents living in parcel 3 and in the ownership townhouses in parcel 10. While resident parking provisions seem satisfactory, there does appear to be a shortage of visitor parking spaces. There is some indication that residents park their second vehicle in the visitor areas, which aggravates the problem. The assumption that in an inner city location, residents would choose other means of transportation than a private car did not hold. Parking provisions must be reconsidered in light of this.

7.5.9 Acoustical and Visual Privacy

Residents were highly satisfied with the visual privacy afforded at LeBreton. With respect to acoustical privacy, residents were most satisfied with the lack of noise disturbances from adjacent units (78.9%), second most satisfied with the lack of disturbance from noise outside the unit (62.8%), and least satisfied with traffic noise (52%).

The relatively high amount of resident satisfaction due to the privacy afforded at LeBreton was further reinforced by the fact that the 78.7% of respondents had made no alterations to improve their privacy. For the 76 people who had made changes, the major alteration had been to add curtains or blinds.

While there was some measure of improvement over the residents' previous homes evident for all six privacy aspects, the most marked improvement was in the lack of noise disturbances from

adjacent units; 42.6% indicated improvement. This is a clear indication that sound insulation between units was successful.

The most marked deterioration was for the amount of disturbance from traffic noise since 43.1% of the respondents cited it as worse than before. Traffic noise annoyance measured within and across groups, is most significant in parcels 1,2,3,8 and 9. These four parcels are located along the north edge of the site, closest to a major source of traffic noise from the Wellington Street arterial. As obviously successful as the sound attenuation efforts were for solving between unit noises, especially for sounds in the more problematic frequency ranges, such as stereo music, the traffic noise attenuation efforts have been less successful. The problem with traffic noise is most severe for residents living in the apartment units located along the Wellington Street arterial (parcels 3 and 9).

7.6 Energy Conservation

7.6.1 Satisfaction

LeBreton residents are most satisfied with their ability to regulate temperature (64.4%), control their energy consumption (63.7%), and with service and maintenance aspects (55.4%) of their heating systems. The greatest source of dissatisfaction expressed was with the evenness of heat throughout the rooms (45.0%).

The most distinctive finding that emerged regarding general satisfaction with performance was related to tenure: residents

in the municipal non-profit rental units prove to be the least satisfied and most dissatisfied with all five aspects of their energy performance.

7.6.2 Awareness

Of the five energy-conserving features of interest, the majority of people reported having individual heating controls (73.0), although all units were provided with them. While the percentage of people who reported having triple glazing is higher than the actual presence of this feature at LeBreton, the number of people reporting having additional insulation is far below the actual figures: in fact, higher grade insulation standards were applied at LeBreton for both roof and exterior wall areas.

Generally speaking, those respondents who stated that they had a particular energy-conserving feature expressed greater amounts of satisfaction with four of the five heating aspects (excluding evenness of heat in rooms), than those who said they did not have these features.

7.6.3 Conventional and District Heating

In general, respondents stating that they had the conventional heating system were more satisfied with all measures of performance than those who stated that they had district heat.

7.6.4 Transferability of the Demonstration Features Attempted at LeBreton

The success of the LeBreton demonstration community lies in the fact that there was agreement between the objectives of the project and resident priorities, as was shown by the high degrees of satisfaction experienced by the residents. Design solutions were found that were acceptable to the resident, despite the constraints posed by the high cost of urban land ringed by city traffic. A good mix of attractive features, combined with design strategies that reduce potential problems, can overcome consumer resistance to medium density housing plans in inner-city locations. It is unlikely that identical opportunities will arise where the LeBreton community may be duplicated, however, successful design strategies may be applied to other sites under appropriate conditions.

There were several successful elements such as sound separation between units, visual privacy measures and energy conservation features that are transferable to other sites and situations. Detailed descriptions of the features and the result of technical evaluations are available (see the LeBreton Evaluation series). This evaluation confirmed that residents also valued the benefits resulting from these measures.

There were some lessons learned from elements that were less successful, such as district heating, traffic noise, and security. Modifications and improvements to these strategies are necessary to address problems characteristic to urban sites.

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APPENDIX A

Multivariate Statistics: A Note on Analytic Methodology

Our initial proposal for this study suggested that a variety of analytic techniques could be used to determine the degree and source of resident satisfaction or dissatisfaction. We have managed, with univariate and bi-variate analyses, to document satisfaction and, we feel, to identify problem areas. At the outset, we also felt that multivariate statistical techniques such as factor, cluster and others might be useful.

What was found was that cluster and factor analysis added nothing to our understanding of the data. If anything, these analyses tended to be more confusing than illuminating as they tended to show **universal** and **unwavering** satisfaction with all aspects of the project. The reason for this is that, given the ordinal scales used and the fact that very few respondents were very **dissatisfied** to any degree or with any consistency, there was **very little variance** in the data to be accounted for. Logically, this implies a **single-factor solution** where everyone appears satisfied with all elements of the project. Of course, the latter is an illusion created by the statistical technique but a closer inspection of individual variables could reveal problem areas and their extent.

After numerous attempts to perform these analyses, they were abandoned for more traditional forms of data examination.

APPENDIX B: QUESTIONNAIRE

October 29 - November 12, 1982 ERG

CMHC

LEBRETON FLATS USER STUDY

QUESTIONNAIRE

. I.D. # 1-4

INTRODUCTION: Hello, my name is _____(your name)_____.

I'm doing a study for Canada Mortgage and Housing Corporation. We sent a letter to your home a short while ago explaining about this study. Did you receive it?

IF NO, SHOW COPY OF LETTER.

The purpose of this study is to find out how people feel about living here, as well as what people appreciate most about LeBreton or where they believe improvements can be made. It is really a unique opportunity for all the residents to express their views.

Participation in this study is voluntary. May we come in and interview you?

IF NOT CONVENIENT, TRY TO ARRANGE TIME TO COME BACK.

ADDRESS: _____

AREA/PARCEL NAME: _____ PARCEL NUMBER [ ][ ] 5 6

TYPE OF DWELLING:

Duplex	1
Rowhouse or Townhouse	2
Stacked Townhouse	3
Apartment in building with 4 stories or more	4 7

CALL-BACK DATA

Result:

C - completed
NA - not at home
R - refused
L - language barrier
CB - come back
I - incomplete

Record for Each Visit:

	Date	Time	Result	Appointment Information
1st Call				
2nd Call				
3rd Call				
4th Call				

INTERVIEWER SIGNATURE: _____

Q. 1 (a) Generally speaking, how satisfied would you say you are with living in LeBreton Flats? Are you...

READ

Very satisfied	1	
Satisfied	2	
Neutral	3	
Not very satisfied	4	
Very dissatisfied	5	
Don't know, no answer	9	8

(b) IF "NOT VERY SATISFIED" OR "VERY DISSATISFIED", ASK:

Are you considering leaving LeBreton at this time?

Yes	1	
No	2	
Don't know, no answer	9	9

Q. 2 (a) Are you aware of any physical features included at LeBreton which were intended to make living here more agreeable or easier, or more satisfactory?

Yes	1	
No	2	
Don't know	9	10

IF "YES", ASK: (b) Could you tell me what those features are? (LIST IN ORDER MENTIONED)

_____ 11 12

_____ 13 14

_____ 15 16

_____ Can't think of any, no ☐ 17

Q. 3 Why did you choose LeBreton Flats rather than the other places you looked at?

DO NOT READ — CIRCLE ALL THAT APPLY

(a)	design and appearance	1	18
(b)	neighbourhood	1	19
(c)	location	1	20
(d)	costs affordable	1	21
(e)	could participate in decision-making	1	22
(f)	wanted to own instead of rent	1	23
(g)	other (SPECIFY)_____	1	24
(h)	no other places considered	1	25
(i)	don't know, no answer	1	26

Q. 4 Why did you leave your last address?

DO NOT READ — CIRCLE ALL THAT APPLY

(a)	cost too high	1	27
(b)	wanted more space	1	28
(c)	wanted different location	1	29
(d)	marital change	1	30
(e)	children/family change	1	31
(f)	wanted to participate in decision-making	1	32
(g)	other (SPECIFY) _____		33 34

_____ 35 36

_____ 37 38

Q. 5 (a) Is the cost of your LeBreton home...

(INCLUDES RENT, UPKEEP, OPERATING COSTS; E.G. UTILITIES, REPAIRS, ETC.)

READ

(a)	a lot less costly than you expected to pay	1
(b)	less costly than you expected to pay	2
(c)	within the range you expected to pay	3
(d)	more costly than you expected to pay	4
(e)	a lot more costly than you expected to pay, or	5
(f)	you didn't have any expectations or concerns about the cost	6
(g)	don't know, no answer	9

IF (d) OR (e), ASK (b): Why do you say this?

_____

_____

_____

Q. 6 The following is a list of several kinds of activities that you might be involved in. Would you please tell me your main method of travel for each activity or destination?

CIRCLE ONLY ONE RESPONSE FOR EACH ACTIVITY.

	OC Transpo	Own Vehicle	Walk	Other	Not.App. D.K., N.A.	Is this mode of transportation different than before your move to LeBreton? Yes	No
(a) work (ASK RESPONDENT TO ANSWER ON BEHALF OF CHIEF WAGE EARNER IN HOUSEHOLD.)	1	2	3	4	9	1	2
(b) visiting friends	1	2	3	4	9	1	2
(c) grocery shopping	1	2	3	4	9	1	2

I am now going to hand you a list of items about aspects and features of your neighbourhood. Read the list and then I will ask you some questions about it.

(HAND RESPONDENT PINK LIST)

Q.7 (a) How satisfied are you, now with the following aspects in your neighbourhood? Are you very satisfied, satisfied, neutral, not very satisfied, or very dissatisfied? (IF NECESSARY, REPEAT THE CATEGORIES FOR THE FIRST SEVERAL ITEMS. MAKE SURE RESPONDENT DISTINGUISHES "VERY SATISFIED", "SATISFIED", "NEUTRAL", ETC.)

(b) When you compare the LeBreton Flats neighbourhood with your previous one, for each of the following items, would you say that at LeBreton they are better, the same, or worse?

(c) If you were looking for a new neighbourhood to live in, how important would each of these items be to you? On a scale of 0 to 10, with 0 "not at all important" and 10 "extremely important", how important is (being or having)....

		(a)						(b)					(c)
		Very Satisfied	Satisfied	Neutral	Not Very Satisfied	Very dis-satisfied	Not.Apps D.K., N.A.	Better	Same	Worse	Not Apps D.K., N.A.		(FILL IN Importance 0 to 10)
(1)	Close to shopping	1	2	3	4	5	9	1	2	3	9		
(2)	Close to work	1	2	3	4	5	9	1	2	3	9		
(3)	Close to downtown	1	2	3	4	5	9	1	2	3	9		
(4)	Close to friends	1	2	3	4	5	9	1	2	3	9		
(5)	Not too much noise	1	2	3	4	5	9	1	2	3	9		
(6)	Good community services	1	2	3	4	5	9	1	2	3	9		
(7)	Good public transportation	1	2	3	4	5	9	1	2	3	9		
(8)	Safety from crime	1	2	3	4	5	9	1	2	3	9		
(9)	Opportunity to socialize with neighbours	1	2	3	4	5	9	1	2	3	9		
(10)	The right number of children	1	2	3	4	5	9	1	2	3	9		
(11)	Opportunity to manage/ control my immediate surroundings	1	2	3	4	5	9	1	2	3	9		
(12)	Close to parks/open spaces	1	2	3	4	5	9	1	2	3	9		
(13)	Close to good schools	1	2	3	4	5	9	1	2	3	9		
(14)	Not too crowded a feeling	1	2	3	4	5	9	1	2	3	9		
(15)	Not too much traffic	1	2	3	4	5	9	1	2	3	9		
(16)	Pleasing physical appearance	1	2	3	4	5	9	1	2	3	9		
(17)	Good place to raise children	1	2	3	4	5	9	1	2	3	9		
	Other features (SPECIFY) (RECORD UP TO 2 ITEMS)												
(18)	_____	1	2	3	4	5	9	1	2	3	9		
(19)	_____	1	2	3	4	5	9	1	2	3	9		

Q.8 (a) If you could, would you change any aspects of the LeBreton Flats neighbourhood?

Yes	1	
No	2	
Don't know, no answer	9	133

IF "YES", ASK: (b) What would you change? (RECORD FIRST 3 ITEMS MENTIONED)

_____ 134 135

_____ 136 137

_____ 138 139

Q.9 (a) Do you have any dependent children living at home with you?

Yes	1	154
No	2	

IF YES, ASK:

(b) When your children play outdoors, where do they play? I will read you a list of places, and would ask you to tell me if your children play in these places often, sometimes, or never. You may have children of different ages, so I would like you to tell me the age of each child and how frequently he/she plays in the following places.

CODE: Often 1; Sometimes 2; Never 3

	Child 1 AGE				Child 2 AGE				Child 3 AGE				
	O	S	N	DK	O	S	N	DK	O	S	N	DK	
(a) at the front of the unit	1	2	3	9	1	2	3	9	1	2	3	9	154
(b) in the common driveway in the parcel	1	2	3	9	1	2	3	9	1	2	3	9	155
(c) in visitor parking	1	2	3	9	1	2	3	9	1	2	3	9	156
(d) in the streets	1	2	3	9	1	2	3	9	1	2	3	9	157
(e) outside the LeBreton development	1	2	3	9	1	2	3	9	1	2	3	9	158
(f) other (SPECIFY) _____	1	2	3	9	1	2	3	9	1	2	3	9	159
	143												

Q.10 (a) How many motor vehicles do you and members of your household presently own?

(b) Is this an increase or a decrease since moving to LeBreton?

	(a) Number of Vehicles				(b)				
					Increased	Decreased	No Change	D.K. N.A.	
Motor vehicles	0	1	2	3 or more	1	2	3	9	160 161

IF HAVE 1 OR MORE MOTOR VEHICLES, ASK:

Q.11 I would like to know where you park your motor vehicle(s), and how frequently you use the facilities listed. I will read a list of places; please tell me whether you use these places often, sometimes or never.

(IF RESPONDENT HAS MORE THAN 2 VEHICLES, ASK HIM TO ANSWER FOR VEHICLES USED MOST FREQUENTLY)

RECORD FOR UP TO 2 VEHICLES.

VEHICLE 1	Often	Sometimes	Never	NOT APPL. D.K. N.A.	
(a) in your driveway, next to your unit	1	2	3	9	162
(b) in a surface parking area inside the parcel	1	2	3	9	163
(c) in the visitor parking area	1	2	3	9	164
(d) on the street, near your unit	1	2	3	9	165

VEHICLE 2	Often	Sometimes	Never	NOT APPL. D.K. N.A.	
(a) in your driveway, next to your unit	1	2	3	9	166
(b) in a surface parking area inside the parcel	1	2	3	9	167
(c) in the visitor parking area	1	2	3	9	168
(d) on the street, near your unit	1	2	3	9	169

Q.12 (a) Are you generally satisfied with the parking arrangements for residents at LeBreton Flats? (PROBE IF DISSATISFIED)

Yes	1	
No	2 ⟶	Why? _____
Don't know, no answer	9 176	_____ 191 192

(b) Are you generally satisfied with the parking arrangements for visitors at LeBreton Flats? (PROBE IF DISSATISFIED)

Yes	1	
No	2 ⟶	Why? _____
Don't know, no answer	9 193	_____ 194 195

Q.13 (a) Generally, do people often, sometimes, or never have difficulty finding your unit?

Often	Sometimes	Never	D.K., N.A.	IF "OFTEN" OR "SOMETIMES", ASK: (b) Why do they have difficulty?
1	2	3	9 196	_____ _____ 197 198

Q.14 (a) Do you feel safe walking in the LeBreton neighbourhood...

	Yes	No	
(i) During the day?	1	2 ⟶ 179	IF NO, Why not? _____ _____ 181 182
(ii) After dark	1	2 ⟶ 180	IF NO, Why not? _____ _____ 183 84

(b) Do you and your neighbours watch out for strangers in your neighbourhood?

Yes	1
No	2
Don't know	9 185

Q.15 (a) Do you have friends . . .

(b) IF HAVE CHILDREN, ASK: Do your children have friends . . .

		(a) You				(b) Children			
		Yes	No	N/A N.S. D.k.		Yes	No	N/A N.S. D.k.	
READ ONE AT A TIME	(a) Next door	1	2	9	186	1	2	9	192
	(b) Same hallway or floor	1	2	9	187	1	2	9	193
	(c) Upstairs/downstairs/same row or building	1	2	9	188	1	2	9	194
	(d) Across the courtyard, driveway - same parcel	1	2	9	189	1	2	9	195
	(e) Elsewhere in LeBreton Flats	1	2	9	190	1	2	9	196
	(f) Elsewhere outside LeBreton Flats	1	2	9		1	2	9	197

This is a list of aspects and features of your home. (HAND BLUE SHEET TO RESPONDENT) Read it over, and I will ask you some questions about it.

Q.16 (a) How satisfied are you with the following aspects of your unit in your present home? Are you very satisfied, satisfied, neutral, not very satisfied, or very dissatisfied? (IF NECESSARY, REPEAT THE CATEGORIES FOR THE FIRST SEVERAL ITEMS. MAKE SURE RESPONDENT DISTINGUISHES "VERY SATISFIED," "SATISFIED," "NEUTRAL," ETC.)

(b) Now, when you compare your present home with your previous dwelling unit, for each of the following items, would you say that at LeBreton they are better, the same, or worse?

(c) I would now like you to rate how important these items are to you when you are looking for a house or apartment. On a scale of 0 to 10, with 0 "not at all important" and 10 "extremely important," how important is (being) the ...

	(a) Very Satisfied	Satisfied	Neutral	Not Very Satisfied	Very dis-satisfied	N/A, D.K., N.A.	(b) Better	Same	Worse	N/A, D.K., N.A.	(c) (FILL IN) Importance 00 to 10
(1) Private yard	1	2	3	4	5	9	1	2	3	9	
(2) Balcony space	1	2	3	4	5	9	1	2	3	9	
(3) Front door at street level	1	2	3	4	5	9	1	2	3	9	
(4) Parking near the unit	1	2	3	4	5	9	1	2	3	9	
(5) Not being troubled by noise from adjacent units	1	2	3	4	5	9	1	2	3	9	
(6) Sense of privacy	1	2	3	4	5	9	1	2	3	9	
(7) Front and back access	1	2	3	4	5	9	1	2	3	9	
(8) Ability or opportunity to make changes to unit	1	2	3	4	5	9	1	2	3	9	
(9) Suitability for your family/household needs (children, elderly, handicapped	1	2	3	4	5	9	1	2	3	9	
(10) Convenient arrangement of rooms	1	2	3	4	5	9	1	2	3	9	
(11) General storage space	1	2	3	4	5	9	1	2	3	9	
(12) Ease of maintenance	1	2	3	4	5	9	1	2	3	9	
(13) Daylight in rooms	1	2	3	4	5	9	1	2	3	9	
(14) Good ventilation	1	2	3	4	5	9	1	2	3	9	
(15) Energy efficiency	1	2	3	4	5	9	1	2	3	9	
(16) Large rooms	1	2	3	4	5	9	1	2	3	9	
(17) Appearance	1	2	3	4	5	9	1	2	3	9	
(18) Feeling of spaciousness	1	2	3	4	5	9	1	2	3	9	
(19) Desired number of bedrooms	1	2	3	4	5	9	1	2	3	9	
(20) Safety/security	1	2	3	4	5	9	1	2	3	9	
Other features (SPECIFY) (RECORD UP TO 2 ITEMS)											
(21) _____	1	2	3	4	5	9	1	2	3	9	
(22) _____	1	2	3	4	5	9	1	2	3	9	

Q.17 (a) If you could, would you change any aspect of your unit?

Yes 1
No 2
Don't know, no answer 9

IF "YES", ASK:

(b) What would you change? (RECORD UP TO 3 ITEMS)

1 _____
2 _____
3 _____

(c) Why? (ASK FOR EACH RESPONSE)

1. _____
2. _____
3. _____

Please read this list of features. (HAND RESPONDENT GREEN LIST)

Q. 18 (a) Please tell me how satisfied you are with each of these features in your present home. Are you very satisfied, satisfied, neutral, not very satisfied, or very dissatisfied with...

(b) When you compare your present home with your previous one, for each of the following items, would you say that at LeBreton they are better, the same, or worse?

(c) On a scale from 0 to 10, with 0 "not at all important" and 10 "extremely important", how important are the following items to you? (READ LIST)

	(a)						(b)				(c)
	Very Satisfied	Satisfied	Neutral	Not Very Satisfied	Very dissatisfied	Not.App D.K., N.A	Better	Same	Worse	Not.App D.K., N.A	(Fill in importance DC to IC
1. not being disturbed by noise from adjacent units	1	2	3	4	5	9	1	2	3	9	
2. not being disturbed by noise from traffic	1	2	3	4	5	9	1	2	3	9	
3. not being disturbed by noise from outside your unit	1	2	3	4	5	9	1	2	3	9	
4. having privacy from people passing by your unit	1	2	3	4	5	9	1	2	3	9	
5. having privacy in outdoor areas	1	2	3	4	5	9	1	2	3	9	
6. having privacy from people living in units across from you	1	2	3	4	5	9	1	2	3	9	

Q.19 (a) We want to know about the type and source of sounds that you hear when you are inside your unit. When inside your unit, do any of the following sounds annoy you a great deal, a little, or not at all?

(b) IF ANNOYED A LITTLE OR A GREAT DEAL, ASK: Where do these sounds come from?

(READ LIST (a) to (e).)

	(a) A great Deal	A Little	Not at All	N/A D.K. N.A.		(b) Yes	No	N/A D.K. N.A.	
(1) Children playing:	1	2	3	9	323				
From (a) unit next door						1	2	9	331
(b) unit below						1	2	9	332
(c) hallways/stairways						1	2	9	333
(d) out of doors						1	2	9	334
(e) don't know source						1	2	9	335
(2) Stereo music:	1	2	3	9	324				
From (a) unit next door						1	2	9	336
(b) unit below						1	2	9	337
(c) hallways/stairways						1	2	9	338
(d) out of doors						1	2	9	339
(e) don't know source						1	2	9	340
(3) People talking:	1	2	3	9	325				
From (a) unit next door						1	2	9	341
(b) unit below						1	2	9	342
(c) hallways/stairways						1	2	9	343
(d) out of doors						1	2	9	344
(e) don't know source						1	2	9	345
(4) People walking:	1	2	3	9	326				
From (a) unit next door						1	2	9	346
(b) unit below						1	2	9	347
(c) hallways/stairways						1	2	9	348
(d) out of doors						1	2	9	349
(e) don't know source						1	2	9	350
(5) Plumbing:	1	2	3	9	327				
From (a) unit next door						1	2	9	351
(b) unit below						1	2	9	352
(c) hallways/stairways						1	2	9	353
(d) out of doors						1	2	9	354
(e) don't know source						1	2	9	355
(6) Cupboard doors closing:	1	2	3	9	328				
From (a) unit next door						1	2	9	356
(b) unit below						1	2	9	357
(c) hallways/stairways						1	2	9	358
(d) out of doors						1	2	9	359
(e) don't know source						1	2	9	360
(7) Road traffic:	1	2	3	9	329				
(8) Other _____:	1	2	3	9	330				
From (a) unit next door						1	2	9	361
(b) unit below						1	2	9	362
(c) hallways/stairways						1	2	9	363
(d) out of doors						1	2	9	364
(e) don't know source						1	2	9	365

Q. 20 (a) Have you done anything to give you more privacy?

Yes	1	
No	2	366

(b) IF "YES", ASK:

What have you done?

_____ 367 368

_____ 369 370

_____ 371 372

Q. 21 (a) Does your dwelling unit have some private open space, such as your own yard, balcony or deck?

	Yes	No	
Yard	1	2	373
Balcony/Deck	1	2	IF BOTH "NO" GO TO Q. 24 374

(b) IF "YES", ASK FOR EACH YES ITEM SEPARATELY:

I would like to know how often you use your _____ (YARD, BALCONY/DECK) for certain activities. Do you use your _____ often, sometimes, or never for...

	Yard					Balcony/Deck				
	O	S	N	DK		O	S	N	DK	
(1) children's play	1	2	3	9	375	1	2	3	9	393
(2) sun bathing	1	2	3	9	376	1	2	3	9	394
(3) cooking/eating	1	2	3	9	377	1	2	3	9	395
(4) socializing/entertaining	1	2	3	9	378	1	2	3	9	396
(5) clothes drying	1	2	3	9	379	1	2	3	9	397
(6) gardening	1	2	3	9	380	1	2	3	9	398
(7) storage	1	2	3	9	381	1	2	3	9	399
(8) other (SPECIFY) _____	1	2	3	9	382	1	2	3	9	400

Q. 22 (a) I would now like to know how satisfied you are with your current private outdoor space. Would you say you are very satisfied, satisfied, neutral, not very satisfied or very dissatisfied with...

(b) Compared to your previous dwelling unit, would you say that your private outdoor space at LaBreton Flats is better, the same, or worse with respect to the following items...

READ EACH ITEM FOR (a) FIRST AND CIRCLE THE APPROPRIATE NUMBER, THEN READ EACH ITEM FOR (b) AND CIRCLE.

	(a)							(b)				
	Very Satisfied	Satisfied	Neutral	Not Very Satisfied	Very dis-satisfied	Not App. D.K., N.A.		Better	Same	Worse	Not App. D.K., N.A.	
(1) Privacy of open space	1	2	3	4	5	9		1	2	3	9	
(2) Size and shape	1	2	3	4	5	9		1	2	3	9	
(3) Access to unit	1	2	3	4	5	9		1	2	3	9	
(4) Maintenance/convenience	1	2	3	4	5	9		1	2	3	9	
(5) Opportunity for surveillance of children at play	1	2	3	4	5	9		1	2	3	9	
(6) Safety and security	1	2	3	4	5	9		1	2	3	9	
(7) Ability to carry out desired activities	1	2	3	4	5	9		1	2	3	9	
(8) Amount of sunlight	1	2	3	4	5	9		1	2	3	9	
(9) Other (SPECIFY) _____	1	2	3	4	5	9		1	2	3	9	

Q.23 (a) Would you like to change this private outdoor space to make it more suitable for yourself and your family?

Yes 1
No 2
Don't know 9

IF "YES", ASK:

(b) How would you change this outdoor space? _____

_____

Q.24(a) Do you and your family use the park?

Yes 1
No 2
Don't know 9

IF "YES", ASK:

(b) For what activities do you and your family use the park?

DO NOT READ — CIRCLE AS MANY AS APPLY

(a) children's outdoor recreation 1
(b) picnics 1
(c) walking the dog 1
(d) cycling 1
(e) jogging 1
(f) walking 1
(g) playing other sports 1
(h) other (SPECIFY) _____ 1
(i) don't know, no answer 1

Q.25 (a) Do you agree or disagree that the LeBreton community offers a variety of housing types and living arrangements and has attracted a mixture of persons with different incomes, occupations and lifestyles?

Agree	1	
Disagree	2	
Don't know, no answer	9	v26

(b) How satisfied are you with the mixture of people who live in the LeBreton community? Would you say you are...

READ

Very satisfied	1	
Satisfied	2	
Neutral	3	
Not very satisfied	4	
Very dissatisfied	5	
Don't know, no answer	9	v27

Q. 26 Would you tell me where you feel your neighbourhood begins and ends? (WRITE DOWN VERBATIM; THEN CODE BELOW)

_____

_____

_____

Parcel only (see list on map)	1	
Parcel and one other parcel in LeBreton	2	
Larger area, ward, etc.	3	
Don't know, no answer, refuse	9	v28

Q. 27 (a) Were you involved in the design of your unit prior to moving in?

Yes	1	
No	2	v29

(b) IF "YES", ASK:

Did you influence decisions regarding the...

		Yes	No	
READ	(1) unit layout	1	2	v30
	(2) number of bedrooms	1	2	v31
	(3) number of washrooms	1	2	v32
	(4) room design details	1	2	v33
	(5) choice of fixtures	1	2	v34
	(6) choice of colours of walls, carpets, etc.	1	2	v35
	(7) choice of finishes (i.e., carpet, paint, paper, wood, etc.)	1	2	v36
	(8) Other (SPECIFY) _____	1	2	v37

Q. 28 Do you feel very involved, somewhat involved, or not at all involved in decision-making at LeBreton?

Very involved	1	
Somewhat involved	2	
Not involved	3	
Don't know, no answer	9	v38

Q. 29 (a) Are you aware of any features about your unit which are intended to reduce the amount of energy your household uses?

Yes	1	
No	2	v39

(b) IF "YES", ASK:

Could you tell me what those features are? (CIRCLE ALL MENTIONED IN (b) COLUMN BELOW)

(c) ALL RESPONDENTS: Do you have any of the following items in your unit? (ASK ONLY THOSE ITEMS NOT MENTIONED IN (b)).

		(b) Yes Unprompted	(c) Yes	(c) No	(c) D.K. N.A.	
	(a) individual heating controls	1	2	3	9	v40
	(b) an individual meter which measures your personal energy consumption	1	2	3	9	v41
READ	(c) triple glazing	1	2	3	9	v42
	(d) additional insulation	1	2	3	9	v43
	(e) efficient gas furnaces	1	2	3	9	v44
	(f) water saving devices (shower-heads and toilets)	1	2	3	9	v45
	(g) other (SPECIFY) _____	1	2	3	9	v46

Q. 30 How satisfied are you with the following aspects of the heating in your unit? Are you very satisfied, satisfied, neutral, not very satisfied, or very dissatisfied with the...

	Very Satisfied	Satisfied	Neutral	Not Very Satisfied	Very dis-satisfied	D.K., N.A.	
(a) ability to regulate the temperature	1	2	3	4	5	9	447
(b) evenness of heat in different rooms	1	2	3	4	5	9	448
(c) costs	1	2	3	4	5	9	449
(d) ability to control amount of energy you consume	1	2	3	4	5	9	450
(e) service and maintenance	1	2	3	4	5	9	451
(f) other (SPECIFY) _____	1	2	3	4	5	9	452

Q.31 (a) Do you have any of the following in your unit?

IF "YES", ASK:
(b) Does this device work properly? (ASK FOR EACH "YES")

	(a) Yes	(a) No	(a) D.K. N.A.		(b) Yes	(b) No	(b) D.K. N.A.	
(1) an automatic thermostat with a timer	1	2	9	453	1	2	9	454
(2) a fan system which evens out the temperatures in your unit	1	2	9	455	1	2	9	456
(3) thermal shutters	1	2	9	457	1	2	9	458

Q.32 (a) Do you do anything special to affect the temperature of your unit?

Yes	1	
No	2	459

(b) IF YES, ASK: What have you done? (PROBE FOR HEATING, COOLING, SUNLIGHT, HUMIDITY CHANGES)

_____ 460 461
_____ 462 463
_____ 464 465

And now, we'd like to ask you a few questions about yourself. Please be assured that your responses will be kept strictly confidential and no attempt will be made to identify individual responses.

Q. 33 When did you move to LeBreton Flats?

MONTH [ ][ ]
DAY [ ][ ]
YEAR 19 [ ][ ]

(IF DON'T KNOW DAY OR MONTH, LEAVE BLANK.)

Q. 34 (a) Is your current home a...

(b) Was your previous home a...

		(a) present Home		(b) Previous Home	
READ	Single family detached house	1		1	
	Semi-detached house	2		2	
	Duplex/triplex/multiplex	3		3	
	Row house or townhouse	4		4	
	Stacked townhouse	5		5	
	Flat	6		6	
	Apartment in a building with three or fewer stories	7		7	
	Apartment in a building with four or more stories	8		8	
	Don't know, no answer, refused	9	432	9	433

Q.35(a) Do you own or rent your present dwelling? IF OWN ASK: Do you live in a co-op?

IF "RENT", ASK: Is your home privately owned, public non-profit, private non-profit, public housing or co-op?

(b) Did you own or rent your previous home? IF OWN, ASK: Did you live in a co-op?

IF "RENT", ASK: Was your previous home privately owned, public non-profit, private non-profit, public housing, co-op, or did you live with friends or relatives or in your parent's home?

		(a) Present Home		(b) Previous Home	
OWN	Private	1		01	
	Co-operative	2		02	
RENT	Private	3		03	
	Public, non-profit	4		04	
	Private, non-profit	5		05	
	Public housing	6		06	
	Co-op	7		07	
(FOR PREVIOUS HOME ONLY)	Parent's home			08	
	Friends or relatives			09	
	Don't know, no answer, refused	9	434	99	435, 436

Q.36 Before moving to LeBreton Flats, did you live...

READ	(a) downtown	1	
	(b) elsewhere in the City of Ottawa	2	
	(c) in the suburbs	3	
	(d) outside Ottawa	4	
	(e) don't know, refuse	9	437

Q. 37 (a) The following is a list of various features which you might have in your home. Do you have... And how many bedrooms and bathrooms do you have?

(b) And which features did you have in your previous home? Did you have... And how many bedrooms and bathrooms did you have?

	(a) Present Home			(b) Previous Home			
	Yes	No		Yes	No		
(a) Separate dining room	1	2	493	1	2	494	
(b) Yard	1	2	495	1	2	496	
(c) Balcony	1	2	497	1	2	498	
(d) Deck	1	2	499	1	2	500	
(e) Parking near unit	1	2	501	1	2	502	
(f) Basement	1	2	503	1	2	504	
(g) Number of bedrooms: (CIRCLE NUMBER)	1 2 3 4		505	1 2 3 4			506
(h) Number of bathrooms:	1 2 3 4		507	1 2 3 4			508

Q. 38 In what age category may I place you?

READ LIST

18 to 24 years	1	
25 to 34 years	2	
35 to 44 years	3	
45 to 54 years	4	
55 to 64 years	5	
65 and over	6	
Refused	9	509

Q. 39 (a) How many persons, including yourself, live in your household? ___ 510 511

IF REFUSE, CODE 99

(b) Could you please tell me the age and sex of the other people in your household?

	Age	Sex: Male	Female	
Person 2	___ Years	1	2	512
Person 3	___ Years	1	2	513
Person 4	___ Years	1	2	514
Person 5	___ Years	1	2	515
Person 6	___ Years	1	2	516

Q. 40 What is your marital status? Are you...

READ

Single, never married	1	
Married, living common-law	2	
Divorced/separated, or	3	
Widowed?	4	
Other	5	
No answer, refused	9	517

Q.41 Which of the letters on this card best describes your total household income before taxes for 1981?

HAND CARD

A.	Under $5,000	01	
B.	$5,000 to $9,999	02	
C.	$10,000 to $14,999	03	
D.	$15,000 to $19,999	04	
E.	$20,000 to $24,999	05	
F.	$25,000 to $29,999	06	
G.	$30,000 to $34,999	07	
H.	$35,000 to $39,999	08	
I.	$40,000 and over	09	
J.	Don't know, refused	99	513, 514

Q.42 Are you currently . . .

CIRCLE OR WRITE IN ONE RESPONSE CATEGORY.

PROBE FOR MAIN USE OF TIME.

READ

Working full-time outside of the home	1	
Working part-time outside of the home	2	
Unemployed	3	
Retired	4	
Student	5	
Housewife/househusband	6	
Other (SPECIFY) _____	7	
No answer, refused	9	515

Q.43 (a) What would you say was the language most frequently spoken in your home?

English	1	
French	2	
Both English and French	3	
Other (SPECIFY) _____	4	516

(b) What is your mother tongue? (LANGUAGE FIRST LEARNED AND STILL UNDERSTOOD)

English	1	
French	2	
Other (SPECIFY) _____	___	517

Q.44 NOTE RESPONDENT'S SEX.

Male	1	
Female	2	518

Q.45 LANGUAGE OF INTERVIEW.

English	1	
French	2	519

THANK YOU VERY MUCH FOR YOUR CO-OPERATION WITH THIS STUDY.

INTERVIEWER SIGNATURE: _____ INTERVIEWER NO. ___ (500, 501)

Q.7 522, 523 524, 525

Q.16 526, 527 528, 529

POOR

QUALITY

ORIGINAL